2011

The effects of school-wide positive behavior interventions and supports on student achievement and other outcomes

Gail Pamela Angus

THE EFFECTS OF SCHOOL-WIDE POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS ON STUDENT ACHIEVEMENT AND OTHER OUTCOMES

A Dissertation

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

in

Educational Leadership

---

by

Gail Pamela Angus, B.A.; M.S.; M.A.

December 2011

THE EFFECTS OF SCHOOL-WIDE POSITIVE BEHAVIOR INTERVENTIONS AND SUPPORTS ON STUDENT ACHIEVEMENT AND OTHER OUTCOMES

A Dissertation

Presented to the

Faculty of

California State University,

San Bernardino

---

by

Gail Pamela Angus

December 2011

Approved by:

[redacted]

Dr. Brett Nelson, Co-Committee Chair, Education 11/21/11 Date

[redacted]

Dr. Deborah Stine, Co-Committee Chair, Education

[redacted]

Dr. Matt Riggs, Committee Member, Psychology

ABSTRACT

With accountability and high stakes testing looming over school districts, it is imperative that interventions that are implemented be research-based and assist with improving student academic achievement. According to the literature, when students' behaviors are under control, teachers are able to spend more time on instruction and students are able to engage in learning. The purpose of this study is to determine the effects of school-wide positive behavior interventions and supports (SWPBIS) on student academic performance and other outcomes. The participants in the study are eight middle schools from an urban Southern California school district that were mandated to implement SWPBIS in 2005. Using archival data collected by the school district and information from the California Department of Education Website, multiple baseline trends, ANOVAs and Pearson correlation were conducted. The findings revealed that when schools implemented SWPBIS, the student outcome data was positively affected and this positive effect continues as schools continue to implement fully all components of SWPBIS. In schools where SWPBIS was implemented fully and the staff were sustaining the program at the school site, the growth in academic achievement was statistically significant and strongly associated with the implementation of SWPBIS. Based on these findings, recommendations for educational leaders are provided.

ACKNOWLEDGEMENTS

I would like to acknowledge and thank my dissertation committee for their support, input and feedback. Especially to Dr. Brett Nelson for always believing in the value of my topic and pushing me to focus on the future. To Dr. Deborah Stine, thank you for providing critical feedback as needed while at the same time being a cheerleader throughout this journey. To Dr. Matt Riggs, thank you for pushing me to create the best possible dissertation. I would also like to thank my cohort and faculty for the support provided along the way.

I would also like to thank my boss Dr. Susan Balt for being flexible during this process and to Dr. Jon Eyler for bring to my attention the PBIS program. To "Cat" thanks for standing at the side-line cheering "Go Dog, Go!!!!" and picking up the pieces along the way.

Thank you to my family and friends who patiently waited for me to complete this project and provided support along the way. A big thank you to my wonderful husband Greg, who never tells me "no" no matter if the idea is 'crazy'. To my children, thank you for understanding my absence during this process. Lastly, to my parents, thank you for teaching me to believe I can do anything I put my mind towards no matter how big the endeavor; and I especially want to acknowledge my mom for being a strong role model for me to follow.

DEDICATION

To my children, may you see you can reach any goal you set your heart and mind towards, as long as you remain focused. To my husband, now you can have your wife back; thanks for being patient.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

Statement of the Problem

In 2001, school districts around the nation received a directive from the Federal Government that all public school students will be proficient in academic achievement by 2014. This mandate that affected educational policies and practices throughout public education is commonly called No Child Left Behind (NCLB). NCLB identified the following as problems with public education: low academic achievement, low graduation rate, high drop-out rate and behavior problems. To build quality schools that address these issues and meet the needs of students, NCLB directed schools and school districts to use research-based instruction and interventions to address the need to decrease student problem behaviors that lead to removal from school and at the same time increase student academic achievement so all students are proficient by 2014.

To accomplish this feat, many districts have focused on content standards and curriculum, as well as developed and implemented pacing guides and intervention programs to remediate academic concerns, while ignoring or minimally addressing students' misbehavior. This plan of focusing on academics provided short-term gains by helping students who were already engaged, but unfortunately neglected the students who were disconnected and who were eventually pushed or dropped out of school. In order to develop *quality schools*,

all systems within the school, district and state need to be explored to determine what is contributing to students' disengagement and failure (Mattison & Aber, 2007). Then, based on the information obtained, schools need to develop a plan to address any negative issues.

Verdugo & Schneider (1999) define quality schools as ones having a shared understanding and commitment to high goals and student achievement, as well as open communication and collaboration in order to problem solve by using data obtained through continuous assessments. In quality schools, staff are provided the necessary resources and support, including professional development training. Using a national data set that identified quality schools, Verdugo and Schneider (1999) conducted an analysis and ascertained that quality schools had fewer serious behavior problems and were considered safer. A definition of safe schools needs to be provided to arrive at an understanding of the meaning of a quality school. A safe school in this context is culturally sensitive and considers the age and gender of the students when developing comprehensive programs to address all aspects of the school's problems (Verdugo & Schneider, 1999). It is important to note that safe schools or academically focused schools are not necessarily quality schools, but quality schools, by definition, are safe and focused on academics.

Since 1989, most schools in the nation have dealt with problem behaviors through the use of *zero tolerance policies* mandating students be removed from the classroom and/or school for inappropriate behavior and misconduct (Skiba,

2004). In many studies conducted in various parts of the nation, there appears to be a disproportionate representation of minority students being punished by being removed from school for minor violations (Evans, 2007; Fenning & Rose, 2007; Mattison & Aber, 2007). Once students are removed from school they are not being taught replacement behaviors. Additionally the recidivism of students repeating the behavior is high. In a study conducted within four Eastern States, the analysis of the data showed that 51% of the African-American students who were removed from school were removed more than once (Evans, 2007; Warren, 2007). Some students simply do not come prepared with the knowledge and skills required to interact appropriately with peers and adults in a school setting (Fenning & Rose, 2007).

Since the induction of zero tolerance policies, there has been no credible evidence that these removals are effective in changing student behavior or promoting productive learning environments (Skiba, 2004). Instead it appears that schools that primarily use zero tolerance face higher dropout rates and lower student achievement due to the fact that students are spending less time in class learning (Skiba, 2004). When students are sent to the office for disciplinary actions, typically they are out of class for approximately 20 minutes, missing valuable instructional time (Scott & Barrett, 2004) in addition to the time lost in days with suspensions and expulsions.

In 2001, around the same time of the passage of NCLB, the Office of the United States Surgeon General published a report with the following recommendations for school safety: (Sugai & Horner, 2002)

- Break up the contingencies that maintain antisocial behavior networks;
- Increase rates and opportunities for academic success;
- Establish and sustain positive school and classroom climates;
- Give priority to an agenda of primary prevention. (p. 26)

Purpose of the Study

The recommendations of the Surgeon General in conjunction with the mandates of NCLB have prompted school districts to implement an intervention that will both affect the appropriate behaviors of students and increase academic achievement. The purpose of this study is to analyze one such intervention called school wide positive behavior interventions and supports (SWPBIS). This intervention teaches students pro-social behavior expectations along with changing the school environment (Sugai et al., 2000) which may affect student academic achievement.

Numerous studies have been conducted to determine the effects of SWPBIS on reducing behavior problems in school (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004; Mass-Galloway, Panyan, Smith, & Wessendorf, 2008; Taylor-Greene, Brown, & Nelson, 1997). In a study conducted in Massachusetts by

Luiselli, Putnam, Handler, & Feinberg (2005), there was a decrease in the number of office discipline referrals, and a separate study in Maryland showed a decrease in suspensions (Bradshaw, Mitchell, & Leaf, 2010).

In other studies, the focus was on how SWPBIS affects the school culture and impacts students staying in school. For example, one study showed that when students were taught the expectations of the school and received reinforcement for implementing the expectations correctly, the number of students being excluded from school decreased (Mcintosh, Filter, Bennett, Ryan, & Sugai, 2010). There were also studies which focused on the effects of SWPBIS on the relationships between students and staff, and found that when SWPBIS was implemented, there were more supportive and caring environments (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008; Mass-Galloway, Panyan, Smith, & Wessendorf, 2008). To build on the literature that already exists regarding the various effects SWPBIS has on a school system, this study will investigate the effects of SWPBIS on student achievement scores.

Significance of the Study

If SWPBIS can be determined to increase academic achievement and decrease problem behaviors through the teaching of socially appropriate behavior skills, SWPBIS may be an intervention school districts can implement to meet the goals of NCLB. Some evidence exists that indicates SWPBIS has a positive impact on problem behaviors (Lewis, Powers, Kelk, & Newcomer, 2002;

Luiselli, Putman, & Sunderland, 2002). When SWPBIS is implemented, studies have shown a decrease in the number of office discipline referrals (ODRs) and suspensions (Lassen, Steele, & Sailor, 2006). The common method used to monitor the affects of SWPBIS is ODRs since they are sensitive to changes in the environment (Sugai, Sprague, Horner, & Walker, 2000). When middle school students from a rural Massachusetts community were taught expected behaviors and provided supportive interventions, the study indicated a decrease in the number of students being removed from school due to anti-social behaviors (Luiselli, Putman, & Sunderland, 2002). When students remain in school, they receive more opportunities to participate in academic instruction leading to increased student achievement (Warren, et al., 2003).

Rationale

The school-wide positive behavior interventions and supports (SWPBIS) framework provides a system for educators to respond to inappropriate behavior concerns and teach appropriate social skills (Sugai & Horner,2006). The philosophy and theory of SWPBIS requires a school site or school district staff to make a paradigm shift in the way they think and respond to negative student behavior. Instead of reacting to misbehavior using strategies like "zero-tolerance", proactive approaches are used where students are taught the expected behaviors. This proactive response includes explicitly defining school expectations and teaching these expectations to the students, as well as

monitoring to ensure successful implementation (Sugai & Horner, 2006). The use of proactive responses will help to reconnect students back into the school environments along with addressing the factors within the school system that contribute to the disengagement of students (Mattison & Aber, 2007). The interactions amongst students and teachers are influenced by the social and educational values agreed to and these interactions occurring throughout the school can affect the school climate (Koth, Bradshaw, & Leaf, 2008).

SWPBIS focuses on preventing inappropriate behaviors from occurring (Sugai & Horner, 2006). The goal is to create a common language and understanding amongst the staff and students as to what types of behaviors are acceptable on the school campus (Freeman, et al., 2006), as well as a way to address inappropriate behaviors when they occur. Led by a leadership team that includes the site administrator, the complete Implementation of the system may take over two to three years (Bradshaw, Barrett, & Bloom, 2004). The leadership team then develops an action plan to assist with the implementation (Sugai & Horner, 2006). The action plan should address staff commitment, common vision, define three to five behavior expectations, identify a reward system and process for addressing inappropriate behaviors, determine how data will be collected and analyzed, secure funding sources as well as needed training and external coaches for support (Sugai & Horner, 2006).

Many studies have been conducted to identify the components that need to be in place to insure sustainable implementation of SWPBIS. Kincaid, Childs,

Blase, & Wallace (2007) worked with the Florida Positive Behavior Support Project with implementation of SWPBIS in over 200 schools. During this time they noticed that some schools were more successful with implementing SWPBIS. To determine what elements supported implementation, the researchers conducted a qualitative study which asked two questions, "W*hat were the barriers with implementation,"* and "*What were the facilitators with implementation?"* The following were identified as being both barriers and facilitators with the implementation process: strong administrator support, staff commitment, philosophical differences, training of staff and students, as well as implementation of a reward system. In this study, the researchers identified the staff's behaviors and attitudes when faced with challenges as the determining factor for the variables being considered a barrier to, or a facilitator with the implementation process. In another study conducted by Barrett, Bradshaw, & Lewis-Palmer (2008) with 467 Maryland schools, key actions which supported the implementation process were identified as: team-based decision making, training, on-going data collection, and external coaching.

Participants and Identification of Variables

The participants in this study are eight middle schools where SWPBIS was implemented in 2005 because of a district mandate. The primary reason for their selection is their knowledge of and recent implementation of school-wide positive behavior interventions and supports. Also these eight middle schools are from

the same urban southern California school district. Since the participants implemented SWPBIS more than five years ago, archival data collected by the California Department of Education (CDE) will be available and analyzed to determine if there were any effects on specific student outcomes as a result of the implementation of SWPBIS in the school. The California Standards Test (CST) mean scale scores was the measure used to determine any effects that may relate to academics, and school-level suspension and expulsion data were used to determine effects on behaviors.

Schools from the same district were chosen in order to limit differences with outside influences on the school such as variance with governance structures, student population, and community influences. These eight schools all function under the same governance structure, policies, and procedures. They all work towards the same content standards using the same core curriculum. The demographics of the students are similar from one school to the other with minimal differences. However there are still some limitations this study needs to address, including influences of other interventions being used with the students, as well as the climate of the school and community influences. Since the information gained will be specific to middle schools, generalization to other school types will need to be done with caution so not to assume similar results will occur in pre-schools, elementary schools, high schools, charter schools or private schools. The results in these various types of schools may vary based on the nuances of their system, such as governance structure, skill-level and

knowledge of staff and culture of the school, as well as outside influences of the community which may include socio-economic status, influence of gangs and diversity of cultures.

Hypothesis

As schools across the nation implement SWPBIS, researchers are noticing fewer students are being sent out of the classroom for discipline issues (Metzler, Biglan, Rusby, & Sprague, 2001). This more constructive use of instructional time should impact student achievement positively because students are remaining on task and completing assignments (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008). It is assumed that SWPBIS will have a positive effect on student academic achievement because students will be engaged in the learning process and teachers will be able to spend more time on instruction instead of redirecting student inappropriate behaviors. To achieve this state, SWPBIS needs to be implemented with *fidelity,* which includes all staff members willing to implement the agreed upon expectations that are defined by location and taught to all students. Also, staff consistently reinforce and acknowledge students' use of appropriate behaviors and provide redirection when students choose not to demonstrate the expected behaviors. When schools implement SWPBIS with fidelity, also known as integrity, student academic achievement in English-language arts, and math should increase as measured by the correlating portions of the California Standards Test.

Organization of the Study

Chapter One provides a brief introduction to the problem created by the mandates of NCLB and current discipline practices. Groundwork for understanding why school-wide positive behavior interventions and supports may be a good alternative to zero tolerance and exclusionary, reactive discipline is provided. Next, the basic elements of SWPBIS are presented, along with a statement of the purpose and significance of the research. Also necessary definitions applied to this research, including those for *fidelity,* are provided.

Chapter Two explores the literature on current discipline policies and practices and the effects on students and school culture. Next, the concepts of school-wide positive behavior interventions and supports are addressed along with the pertinent literature in the areas of implementation, and effects of the intervention on student outcomes and school culture. Lastly, research questions which are based on areas in the literature that are lacking and significant are introduced as a developmental guide.

Chapter Three contains a detailed description of the rationale for the methodology utilized. A review of the process used by the schools in the study to implement SWPBIS is provided. An introduction of the dependent variables along with an explanation for why each measure was chosen, as well as how multiple baseline graphs helped to identify any trends.

Chapter Four contains the results showing the effects of school-wide positive behavior interventions and supports on various student outcomes, in the

area of academics and behaviors. To review the effects of SWPBIS on behavior, suspension, expulsion and office discipline referral data are reviewed. To determine what effects the intervention has on academics, California Standards Test (CST) English-language arts and math mean scale scores were used. The results from ANOVA analyzes will determine if the change in student outcome data was statistically significant and Pearson correlation to identify any changes associated with the implementation of SWPBIS will be provided.

Chapter Five ends with a summary of the study and findings. The limitations of the study are addressed, as well as recommendations for further research in this area are provided.

CHAPTER TWO

LITERATURE REVIEW

This chapter addresses the literature relative to the concepts of school-wide positive behavior interventions and supports (SWPBIS) as a possible intervention to deal with student problem behaviors and as a means to increase student achievement. Staff and students' interaction are investigated with a focus on staff bias, as well as discipline practices, such as *zero tolerance*. SWPBIS will be defined in detail through the review of the core tenets and implementation of the system. Research on the implementation of SWPBIS within a school system will be examined, including various case studies and statistical analyses. Lastly, the review will explore the effects schools experienced from implementing SWPBIS.

When students do not use appropriate social skills in school, they disrupt instruction and interfere with their learning and the learning of others, which negatively impacts student achievement. This loss of instructional time is compounded when students are sent out of class to be disciplined. The time administrators spend dealing with discipline concerns prevent them from being instructional leaders and being able to support teachers and students with learning in the classroom. In Evans' (2007) analysis of office discipline referrals, she found that the classroom is where problem behaviors most frequently occur. One possible cause of this problem is that teachers do not employ tolerance,

patience, flexibility or a variety of positive strategies to respond to misbehavior. SWPBIS offers an alternative solution and positive interventions to address these issues through employing prevention and interventions.

Unjust Discipline

Blatant racism is often evident through unjust disciplinary practices (Rodriguez, 2008). When discipline practices used throughout the nation are explored, it becomes evident that discipline and consequences are not equally administered amongst various student groups. For example, in a case when a group of African-American students were talking loudly in a school hallway, it was automatically assumed they were fighting and they were subsequently suspended (Mobokela & Madsen, 2003). In another case, seven African-American students were suspended from school for two years for brawling (Warren, 2007). Many students are being removed from school, not for what they have done, but for the potential of being dangerous (Fenning & Rose, 2007).

Students of minority groups face the largest challenge. Many students come from a different culture than their teachers which causes conflict (Fenning & Rose, 2007). It is not uncommon for African-American students to receive office referrals for truancy, for failure to bring a pen to class, for questioning the teacher (e.g. "Why do you have to do that?") or for language that seems threatening (Evans, 2007; Fenning & Rose, 2007). In some situations teachers have became hostile, making the situation worse (Evans, 2007). Evans gave an

example of an African-American student who accidently bumped into a white teacher and the teacher threatened to press charges against the student (2007, p. 180). These types of behaviors are considered disrespectful, defiant, or insubordinate (Evans, 2007), but students are often removed from school without considering the student's social or cultural environments (Fenning & Rose, 2007; Mobokela & Madsen, 2003; Ryan, 2003). School staff do not always take into consideration the impact of the student's family or home environments and how this influences behavior.

Minority students are disproportionately represented in the disciplinary statistics (Mattison & Aber, 2007). African-American students are two to three times more likely to be suspended than Caucasian students (Mattison & Aber, 2007; Skiba, 2004, p.3), as well as being overrepresented in office referrals, corporal punishment and school expulsion. Across the nation, 68% of all African-American students have been suspended at least once during their school careers (Evans, 2007). Of the 68% who have been suspended, 51% have been suspended two or more times (Evans, 2007; Warren, 2007).

Much of the data shows a strong correlation between a students' low social economic status (SES) and/or being part of a minority group with the possibility of them being suspended (Evans, 2007). Warren (2007) surveyed four Eastern States' disciplinary practices and the results were profound. The study showed 40% of the 26,920 office referrals reviewed were for minority students; however the overall school demographics show minority students represented

only 29% (Warren, 2007). When Warren (2007, p. 25) examined suspension data, similar results were found; out of the 9,559 suspensions, 3,342 (35%) were served by minority students. According to Brown & Beckett (2006) minority students, such as African-American, Hispanic and those students represented by a low SES, are disciplined more severely than students in the majority.

Critical Race Theory

Critical race theory (CRT) provides a prospectus to help understand these discriminatory practices (Evans, 2007). CRT is founded on the notion that traditional values and standards provide the rules and directions for how people should particpate in society and various institutions like school (Evans, 2007). Students who embraced certain actions, beliefs and behaviors that conformed with the norms have been accepted (Evans, 2007), but students who do not follow the expectations and 'fit-in' were outcast (Evans, 2007; Fenning & Rose, 2007).

The following example demonstrates the need to teach students expected norms. Many African-American students are raised in home environments where multi-tasking and group activities are emphasized, however the expected behavior in a classroom is to do one task at a time (Brown & Beckett, 2006). When African-American students interrupt the teacher or speak loudly, they believe they are showing interest in the subject. This example accentuates the dichotomy between the meaning behind the students' actions and the teacher's belief that they are being disrespectful and disruptive, and as a result these

students are removed from the classroom (Brown & Beckett, 2006). Past research has shown African-American students are punished more frequently and harshly for subjectively less serious reasons (Brown & Beckett, 2006; Fenning & Rose, 2007; Skiba & Peterson, 2000; Skiba & Sprague, 2008).

When looking at suspension data presented early through the lens of how teachers/staff and students interact differently based on student's race, one can be led to believe discipline and suspensions may be racially motivated (Evans, 2007; Fenning & Rose, 2007; Skiba R., 2004; Warren, 2007) and consequences often not applied equally to all students. Students resent this arbitrary enforcement of rules and tend to believe that suspension and expulsion are used unfairly (Skiba R., 2004) instead of behavior being based on an agreed upon set of behavior standards. To eliminate arbitrary discipline and work towards creating a positive school environment for learning, it was recommended in the literature to implement a behavior system that includes a set of behavior standards that all school staff agree to proactively teach and respond to misbehavior consistently with all students (Skiba & Peterson, 2000; Skiba R., 2004; Skiba & Sprague, 2008).

Zero Tolerance

Many schools around the nation have adopted *zero tolerance policies* (McCurdy, Kunsch, & Reibstein, 2007) to address problem behaviors. These policies mandate students be expelled from school for violations that include

weapons, drugs, and alcohol; some school districts also include fighting, threats, and swearing (Skiba, 2004). Zero tolerance occurs when a behavior policy calls for strict, punitive discipline procedures typically delivered in the form of exclusion from school (Skiba & Peterson, 2000) through *reactive consequences*, such as office referrals and suspension. Fenning and Rose define a reactive consequence as being punitive in nature because it does not involve direct teaching of an appropriate replacement behavior (2007, p. 547). On the other hand, proactive consequences have the potential to directly teach an alternative expected behavior (Fenning & Rose, 2007, p. 547). The removal of students from school is considered punitive if no alternative behavior is taught.

Zero tolerance policies have only an immediate effect in reducing serious behaviors and are ineffective in sustaining a positive school climate to maximize teaching time and learning opportunities (Sugai & Horner, 2002, p. 26). Schools that use suspension more frequently appear to have poor school climates, higher dropout rates, and lower achievement (Skiba, 2004). Aligning with research on proactive, positive interventions to alter a students' behavior, students need to be taught expectations in order to develop viable, sustainable, alternative replacement behaviors (Farrell, 2009, p. 95).

A school's discipline and zero tolerance policies can be seen as a means for pushing students out of school instead of demonstrating concern for the student's safety or the safety of others (Fenning & Rose, 2007; Skiba & Peterson, 2000). If students do not feel satisfied or connected to school, the

belief may prompt misbehavior which creates a cycle of more reprimands from school staff leading to the consequence of being removed from school (Baker, 1999). These actions perpetuate the dissatisfied and unconnected feelings of students. In some cases, the exclusion may have been a reward for students who are already disengaged from school and possibly reinforced the students to repeat the behavior again. Another perspective when exploring this issue of being removed from school is that students can feel rejected, resulting in the development of self-fulfilling beliefs that they are incapable of following school rules (Brown & Beckett, 2006; Fenning & Rose, 2007).

For the benefit of students, an alternative to zero tolerance needs to be implemented in schools, such as a system that promotes productive learning climates and addresses disruptive student behaviors (Skiba, 2004). This system should embrace a social justice theory (Theoharris, 2007) which disrupts and subverts the status quo that promotes the marginalization and exclusionary process of punishing student misbehavior without teaching an expected alternative behavior. Tobin & Sugai (1999) concluded that sixth grade student discipline data, such as office discipline referrals, suspensions and expulsion data are great indicators of further problem behaviors in high school if appropriate social skills and interventions are not provided.

It is important for school staff to consider focusing on establishing appropriate social behaviors instead of punishment (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004). This can be completed by developing clearly defined

expectations that are taught and reinforced while at the same time putting in place systemic interventions to prevent inappropriate behaviors (Irvin et al., 2004). One system that addresses students' misbehaviors fairly and consistently, with a focus on prevention, is school-wide positive behavior interventions and supports (SWPBIS; Mcintosh, Filter, Bennett, Ryan, & Sugai, 2010).

School-Wide Positive Behavior Interventions and Supports

School-wide positive behavior interventions and supports (SWPBIS) is a whole school approach for social and learning outcomes that are effective and systemic to prevent problem behaviors, including individual behavioral interventions (Sugai & Horner, 2008, p. 69). SWPBIS is the integration of valued outcomes, procedures, systems, and interventions to prevent inappropriate conduct and change social patterns in order to minimize problem behaviors (Carr et al., 2002; Sugai, Horner et al., 2000; Sugai & Horner, 2006, p. 105). SWPBIS is a long-term approach comprised of comprehensive methods, strategies, and interventions that are carefully coordinated to create a systemic transformation to achieve socially appropriate behavior changes for both students and school staff (Farrell, 2009; Luiselli, Putnam, Handler, & Feinberg, 2005; Simonsen, Sugai, & Fairbanks, 2007; Sugai, Horner et al., 2000, p. 133; Sugai & Horner, 2004) through locating, developing, teaching, coaching, and reinforcing alternative skills to replace, as well as to prevent problem behaviors (Farrell, 2009, p. 95).

SWPBIS includes systems for identification of at-risk students, management and analysis of information, as well as tracking students' progress (Farrell, 2009). A goal of this system is for the environment to no longer promote and reinforce student anti-social behaviors that prevent teachers from teaching and peers from engaging in learning.

> The structures are premised on the assumption that when all school staff members in all school settings actively teach and consistently reinforce appropriate behaviors, the number of students with serious behavior problems will be reduced and the school climate will improve (Irvin et al., 2004, p. 131).

SWPBIS is a "Non-curricular universal prevention strategy that aims to alter the school environment by creating improved systems and procedures which promote positive change in staff and student behaviors" (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008, p. 462; Bradshaw, Debnam, Koth, & Leaf, 2009). Another goal of this system is to provide a structure (Barrett et al, 2008) and specific interventions determined through data analysis as being necessary to provide for all students in order to improve the educational experience and environment (Ervin, et al., 2007, p. 7). Due to the fact that each school site's stakeholders develop a specific program to address the unique needs of the school, a pre-packaged program or curriculum cannot be adopted (Barrett et al., 2008; Bradshaw et al., 2009; Taylor-Greene, Brown, & Nelson, 1997, p. 110).

The school-wide plans created through this structure clearly articulate the staff's unified vision of positive behavior expectations, incentives for rewarding appropriate behaviors, and consistent strategies for managing student inappropriate behaviors (Bradshaw, Mitchell, & Leaf, 2010, p. 133; Sugai & Horner, 2006; Sugai, Lewis-Palmer, Todd, & Horner, 2005). The aim of SWPBIS is to change the social environment of the school instead of focusing on one student's behavior (Chitiyo & Wheeler, 2009; Metzler, Biglan, Rusby, & Sprague, 2001, p. 476; Warren et al., 2003) to enhance school organizational health (Bradshaw, Koth et al., 2008). SWPBIS systems are considered for all students, utilized by all staff, in all settings in order to prevent the development of problem behaviors as well as intervening with students who are identified as demonstrating at-risk behaviors (Luiselli et al., 2005; Simonsen et al., 2007; Sugai & Horner, 2006; Warren et al., 2006). In this literature review and analysis, the term "staff" refers to every employee who works at the school site, which may include administration, teachers, clerical, custodian, librarian, instructional assistance, counselors, etc.

The goal of SWPBIS is to create environments which promote student learning and engagement, and decrease the risk for social and behavioral problems (Ervin et al., 2007, p. 8). Through systematic, comprehensive and proactive approaches, the faculty and staff actively teach and acknowledge expected appropriate social behaviors (Clonan, McDougal, Clark, & Davison, 2007; Lewis, Sugai, & Colvin, 1998). Sugai and Horner (2002, p. 29)

recommend using research-validated strategies and practices in a systemic approach. This includes administrator's support, team based problem-solving, and data-based decision making to improve school cultures. The creation of supportive school environments and continuum of interventions to support the at-risk student behaviors are achieved through the integration of systems, data and practices within the school (McIntosh, Filter, Bennett, Ryan, & Sugai, 2010; Simonsen et at., 2007).

History

SWPBIS is not a new intervention package or a new theory of behavior management, but an application of a behaviorally based-systems approach to enhance the capacity of schools, families and communities to design effective environments that improve the fit or link between research validated practices and the school environment (Sugai, Horner, et al., 2000, p. 133). In the 1990's, the system was called effective behavior supports (EBS; Lewis & Sugai, 1999). The system was developed from work done around positive behavior supports which was implemented with individuals experiencing severe behavioral problems (Carr et al., 2002; Warren et al., 2006). The developers of EBS noticed that the same process used with determining the cause of behavior problems with individuals can be applied to school sites. The implementers of EBS took a team approach to look at current practices in a school to determine issues and concerns regarding behavior problems (Lewis & Sugai, 1999). Based on the information gathered, a plan is developed which includes behavior expectations

for both school-wide and classrooms. The plan also includes the teaching of the behavior expectations, development of a reward system for appropriate behaviors, a plan for discouraging inappropriate behaviors, and means for collecting behavior data. The implementation of EBS systems within school settings have been supported through professional development and consultants' technical support and feedback (Lewis & Sugai, 1999).

Since the mid-1990's, the literature has referred to EBS as being applied school-wide (Lewis & Sugai, 1999; Walker et al., 1996), however, in the early 2000's the name evolved to include school-wide and morphed into school-wide positive behavior supports. Today it is commonly referred to as school-wide positive behavior interventions and supports. In this literature review and analysis, the terminology school-wide positive behavior interventions and supports (SWPBIS) will be used.

Core Tenets

According to Sugai and Horner (2006, p. 246), three main tenets guide school-wide positive behavior interventions and supports. These are prevention, theoretically sound and evidence-based practices, and systems implementation. By creating a common language for staff, SWPBIS creates systems and practices that encourage implemenation and sustained use of postive behavior supports for the benefit of all students (Freeman et al., 2006, p. 5). A system perspective is used to ensure a contextual fit between interventions and the needs of the students and staff, which includes a continuum of behavior supports

that emphasize prevention and altering the school environment through changing the focus of school discipline polices and procedures to more of a preventative one (Sugai, Horner et al., 2000).

Prevention. A major tenet of school-wide positive behavior interventions and supports is its focus on preventing student misbehavior and providing interventions before the student starts to have difficulty. For the formal prevention to be successful, a multi-year commitment to a common goal of supporting all students' behavior needs with appropriate intervention must be made by all school staff members (Sugai & Horner, 2006). This committment will promote positive change in staff behavior while at the same time altering students' behavior (Bradshaw et al., 2010, p. 134) through the teaching of the agreed on expected social behaviors.

The basis for SWPBIS is founded in the prevention model used by public health agencies (Bradshaw, Koth et al., 2008; Bradshaw et al., 2010; Sugai & Horner, 2006). In 1996, Walker et al. introduced the idea of addressing behavior using the 1950 model for preventing chronic illness (Sugai, 2007, p.115). This model is based on three-tiers of prevention and interventions that increase with intensity as needs require (figure 1; Farrell, 2009; McCurdy et al., 2007; Sugai, 2007). The prevention model includes screenings and non-invasive interventions provided to all. For those not responding to the non-invasive interventions, more focused group or intensive individual interventions are available (Walker et al., 1996). The overlapping tiers allow for the interventions applied at the primary

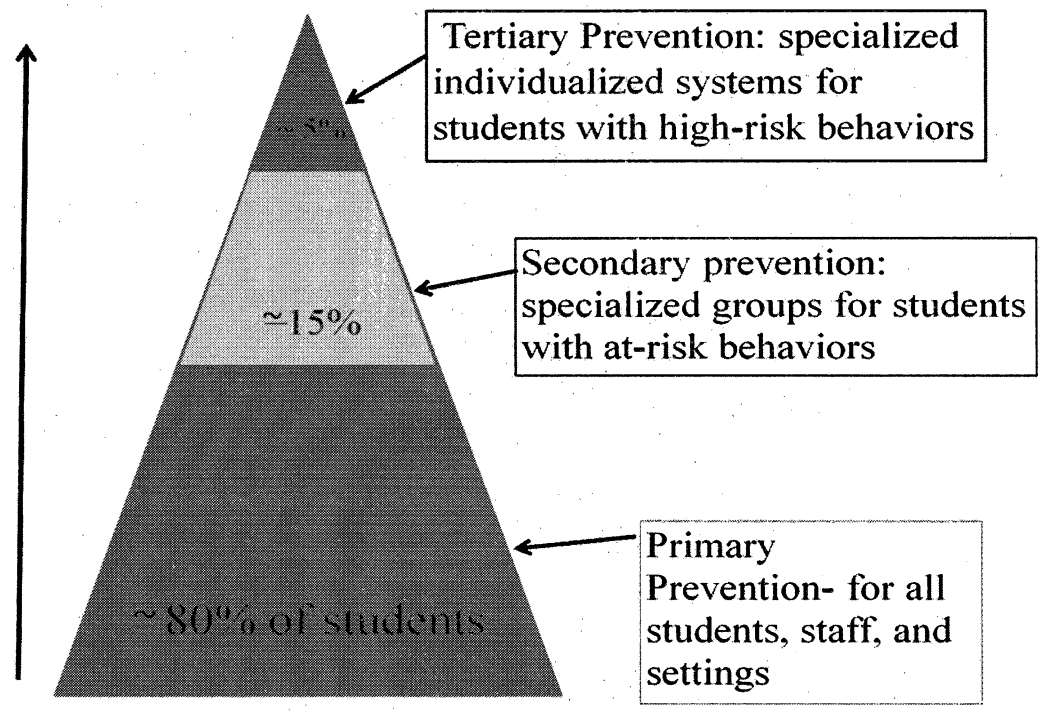

Figure 1: Three-Tiered Prevention Continuum of Positive Behavior Support

level to be available to students no matter what tier of intervention his or her behavior needs require (Sugai, 2007).

Tier one. When school-wide positive behavior interventions and supports are in place, the foundation tier, called the primary or universal tier, is intended to address the needs of 80%-85% of the students on the school campus (Sugai & Horner, 2006). Freeman et al. (2006, p.6) consider the main function of the primary tier is to create a positive social culture in which prosocial behaviors are explicitly taught and reinforced to all students within all school settings (Sugai & Horner, 2006). The focus in this tier is on prevention of the development of problem behaviors with an emphasis on teaching and encouraging desired social

behaviors, as well as the consistent response of adults to the occurrence of problem behaviors to remove factors that promote or sustain inappropriate behaviors (Sugai & Horner, 2002). Most students, approximately 85%-90%, will come to school prepared by their home environments with appropriate skills and supports so the first tier will meet their needs (McCurdy et al., 2007; Sugai, Sprague, Horner, & Walker, 2000). However, the remainder of the students may need the supports from tiers two or three.

Tier two. For 10%-15% of the student body who are exhibiting "at-risk" behaviors, the secondary tier focuses on removing or reducing the impact of risk factors (Sugai & Horner, 2002, p. 37; Sugai & Horner, 2006) by providing strategic, targeted, intense interventions (Freeman, et al., 2006; McCurdy et al., 2007; Sugai, 2007). Teams meet to determine appropriate interventions to help prevent at-risk behaviors from developing into more serious, chronic behavior (McCurdy et al., 2007). Many interventions at this level include increased adult attention and monitoring (Sugai & Horner, 2006). Another intervention provided to students at this tier is a connection with a staff member on campus who the student "checks-in and checks-out" with daily (Freeman et al., 2006; McCurdy et al., 2007, p. 13). Group and individual sessions on anger management and social skills are provided to students who require more intensive and explicit instruction in these areas.

Tier three. The third tier is for the most serious and chronic patterns of antisocial behavior which are usually exhibited by only 5% or less of the student

population, (McCurdy et al., 2007, p. 13; Sugai & Horner, 2006). The interventions at this tier are individually designed and highly intensive (Sugai, 2007). Typically, functional behavioral assessments are conducted at this tier to determine the needs of the individual student (McCurdy et al., 2007; Sugai & Horner, 2006). Sometimes outside agencies are involved, and team-based interventions and services are coordinated with the school to address both the students and their family's needs (Freeman et al., 2006; Scott & Eber, 2003).

Continuum of Evidence-Based Interventions. Evidence-based interventions are defined by Sugai and Horner (2006, pp. 247-248) as interventions based on sound theory which have been tested to be effective, efficient, relevant, and durable. SWPBIS does not promote one specific practice, but instead requires a multitude of empirically, evident practices be adopted (Sugai & Horner, 2006), to help the school increase academic performance, increase safety, decrease problem behaviors and establish a positive school climate (Kincaid, Childs, Blase, & Wallace, 2007). The practices and interventions chosen by the school staff members should be based on the review of data to determine the behaviors impacting the school's safety (Sugai & Horner, 2004, p.13).

Components of the System

The components of SWPBIS include problem-solving teams, a proactive model that provides evidence-based interventions, and the use of assessments and data to make decisions (Hawken, Vincent, & Schumann, 2008). This

requires systemic attention to training, monitoring, reinforcing social behaviors, and using targeted interventions at various levels of intensity to address the specifically identified needs of students (Sugai et al., 2000; Taylor-Green et al., 1997). A successful SWPBIS program includes a leadership team, the development of expectations including a reward system and a system for monitoring data. These components are detailed below.

Leadership Teams. A key component of school-wide positive behavior interventions and supports is the problem solving team that focuses on changing the social environment of the school, rather than focusing on affecting individual students' cognitions, attitudes and behaviors (Medley et al., 2008; Metzler et al., 2001, p. 476; Warren et al., 2003). A leadership team needs to be established that includes key staff members who are respected by their peers and representative of the school population, the administrator, students, parents, and other community stakeholders (Bradshaw et al., 2010; Freeman et al., 2006; George, White, & Schlaffer, 2007; Handler et al., 2007; Simenson et al., 2007; Stollar, Poth, Curtis, & Cohen, 2006; Sugai, Horner et al., 2000; Sugai & Horner, 2002; Sugai & Horner, 2006; Taylor-Green et al., 1997; Warren et al., 2006).

This collaborative team is responsible for guiding the process (Warren et al., 2006), as well as establishing policies, practices and systems which help to secure appropriate political support and resources needed for implementation and long–term sustainability (Bradshaw, Koth, et al., 2008; Farrell, 2009; Sugai & Horner, 2006). This work includes developing and monitoring the execution of

the action plan that includes staff training, coaching needs, and any program elimination or implemention (Sugai & Horner, 2002; Sugai & Horner, 2004; Sugai & Horner, 2006; Sugai & Horner, 2008; Warren et al., 2006).

To accomplish the numerous tasks and ensure successful implementation and sustainability of SWPBIS, it will benefit the leadership team to understand the various stages of implementation: precontemplation (deciding to do something), contemplation (deciding what to do), preparation (developing the plan), action (implementing the plan), maintenance (monitoring and revising; Bradshaw et al., 2009) and determining the duration of each stage. Bradshaw, Barrett and Bloom (2004) identify four stages of implementation as preparation (school prepares to implement), initiation (school begins to implement), implementation (the school is actively implementing), and maintenance (core pieces are in place and the focus is on sustaining). The preparation and implementation stage may take two to three years, and maintenance may take from four to seven years (Bradshaw et al., 2004). The leadership team will need to regularly meet (Warren et al., 2006), at least two times per month (Bradshaw et al. 2010; Luiselli et al., 2005), and visibly share with all staff members the outcomes of these meetings, as well as accomplishments with, and benefits from SWPBIS implementation (Sugai & Horner, 2006).

A high priority for the leadership team is for SWPBIS to be long-term and part of the culture. To accomplish this feat, it is important for the leadership team to show a need for the preventions provided by SWPBIS and integrate the

initiative with others within the school, district and state (Stollar et al., 2006; Sugai & Horner, 2006). The leadership team will be instrumental with building commitment amongst all staff members (Luiselli etal., 2005), and will need to intentionally include staff training and on-going coaching in the action plan to build capacity for successful implementation (Luiselli et al., 2005; Sugai & Horner, 2006). The leadership team will also be charged with insuring that the philosophy of SWPBIS is protected from changing times (Warren et al., 2003).

In order to successfully support the school with implementation of SWPBIS, the leadership team will need to build their own capacity by learning the necessary skills and strategies to support the establishment of SWPBIS. The recommendation is for the team to attend trainings and develop a relationship with an external coach for technical assistance and support (Bradshaw et al., 2010; Metzler et al., 2001; Safran & Oswald, 2003; Taylor-Green et al., 1997). In the beginning, trainings and coaching for the leadership team members will focus on creating knowledge of the various school systems, gaining an understanding of how to problem-solve by making data-driven decisions, conducting self-assessments, securing staff buy-in, and developing the action plan (Bradshaw, Koth et al., 2008; Sugai & Horner, 2006). During planning and implementation, the coach will attend the bi-weekly meetings in person, but after the first year the interactions with the outside coach may become less formal in the forms of phone calls and emails (Sugai & Horner, 2006).

Important functions of the leadership team are planning, problem solving and evaluating data to make informed decisions about SWPBIS, as well as evaluating the progress towards meeting the established action plan's goals (Luiselli et al., 2005; Stollar et al., 2006; Sugai & Horner, 2006). The leadership team spends a lot of time reviewing student and system level data in order to identify and problem solve the inappropriate behaviors impeding the school site (Stollar et al., 2006). The results of this process will create the outcome goals to guide the development of the action plan and determine how the system will be evaluated (Stollar et al., 2006). After analyzing the results of the evaluations, the leadership team will follow-up by making the necessary changes and/or adjustments to the action plan to work through any identified barriers (Bradshaw, Koth et al., 2008). To carry-out this function, the leadership team must determine and establish a system for collecting data (Bradshaw, Koth et al., 2008; Luiselli et al., 2005).

As part of the SWPBIS action plan, the leadership team determines three to five overarching school rules (Bradshaw, Koth et al., 2008; Sugai & Horner, 2004; Warren et al., 2006). Sprague (2009) suggests the expectations be simple such as "be safe", "be respectful", and "be responsible". As part of this task, these school-wide behavioral rules and expectations must be defined (Bradshaw, Koth et al., 2008; Lassen, Steele, & Sailor, 2006; Metzler et al., 2001; Sugai & Horner, 2002; Warren et al., 2006). One suggestion is to use a matrix that provides a detailed explanation and description of the expected behavior when

implemented in all locations on the school campus (e.g. the office, classroom, cafeteria, library, etc).

Expectations. Luiselli et al. (2005, p. 184), defined expectations as *social skills* which students need to understand in order to interact effectively in a school setting with staff and peers. Farrell (2009) refers to them as "desired outcomes". These social skills may include problem-solving, conflict resolution, negotiation, and friendship building.

In developing the three to five positively-stated expectations for the school, all stakeholders provide input and ensure that the expectations are known by all staff members and posted throughout the school including classrooms (Bradshaw et al., 2010; Luiselli et al., 2005). These expectations need to be clearly defined and taught to the students prior to implementation, and reinforced by the staff through the use of a consistent reward system (Bradshaw, Koth et al., 2008; Bradshaw et al., 2010; Freeman et al., 2006, Luiselli et. al., 2005; Mass-Galloway, Panyan, Smith, & Wessendorf, 2008; McCurdy et al., 2007; Metzler et al., 2001; Sugai & Horner, 2002; Sugai & Horner, 2006; Taylor-Green et al., 1997; Warren, 2007). The teachers and administration explicitly teach the rules and expectations to the students so there are no questions as to what behavior is expected in each environment (Ervin et al., 2007; Lassen, et al., 2006, p. 704; Metzler et al., 2001, p. 475; Sugai & Horner, 2002, p. 32; Warren et al., 2006, p. 189). The recommendation is for lesson plans for directly teaching these expectations be developed and taught by all staff to all students at the

beginning of the school year and repeated at least one time per month throughout the remainder of the year (Bradshaw et.al., 2010; Taylor-Green et al., 1997).

Directly instructing, using precorrection and monitoring of the newly learned behavior expectations is an imperative step with SWPBIS for students to be successful (Lewis et al., 1998), since not all students come to school with the same background knowledge regarding "appropriate school behaviors". To ensure this proactive process takes effect, the teachers model the expected behaviors both incorrectly and correctly (Mass-Galloway et al., 2008), as well as having the students practice the correct expected behavior with immediate reinforcement provided. The belief is, by teaching the rules and expected behaviors, the students will know what is expected of them and will not misbehave. Through this process the teacher frontloads the students with the expected school behaviors and allows the students to know what is expected of them instead of guessing and having difficulties by breaking school rules.

In a study conducted by Lohrmann & Talerico (2004), well defined expected behaviors were taught through role-play and positively reinforced to support 10 students with learning appropriate social skills and expected behaviors for the classroom. The three expected behaviors in this study were 1) stay in your seat, 2) complete your assignments, and 3) talk only when it is your turn. The findings from the study showed that after three days of teaching expected behaviors there was a substantial decrease with problem behaviors.

For example the base line for talking-out behaviors during reading was (148), language arts (110) and math (86), and after the intervention it went down to 15, 13 and 17 respectively (Lohrmann & Talerico, 2004, p. 116). The teaching of the expected behaviors and use of positive reinforcement helped to keep the school environment conducive to learning. Using positive practices like teaching expectations provides alternatives to negative consequences (Lohrmann & Talerico, 2004, p. 116). Sugai and Horner (2002) recommend monitoring all staff to ensure they are teaching all students the expected behaviors at the beginning of the year with periodic reviews throughout the year.

Reward System. A reward system should be established to assist the students with learning and demonstrating appropriate behaviors; however a continuum for addressing inappropriate behaviors also needs to be developed. With prevention being the focus, and positive reinforcement being stressed (Luiselli, et al., 2005), staff acknowledgement of appropriate behaviors and discouragement of inappropriate behaviors should be part of the action plan created by the leadership team (Bradshaw, Koth et al., 2008; Bradshaw et al., 2010; Lassen et al., 2006, p. 704; Metzler et al., 2001, p. 475; Sugai & Horner, 2002, p. 33; Warren et al., 2006, p. 189). This can be established through the use of active supervision which includes proximity, *precorrection*, and increased contact (McIntosh et al., 2010), in order to provide more opportunities for positive feedback and reinforcement of appropriate behaviors (Sugai & Horner, 2002; Warren et al., 2006). Proximity is when close adult presence and supervision is

provided. Precorrection has the teacher provide a structured reminder or practice prior to encountering a stituation that known problem behaviors have occurred in the past (Sugai & Horner, 2002).

The developed system to reward appropriate behaviors may incoporate the use of tangibles, such as tokens or tickets, that can be turned in for raffles or prizes (Bradshaw et al., 2010; Taylor-Green et al., 1997). It is recommended that the action plan includes specific language on how all staff will be consistent when addressing inappropriate behaviors no matter the school settings (Bradshaw et al., 2010; Taylor-Green et al., 1997).

Metzler et al. (2001) conducted a two year study of a school that clearly defined and explicitly taught the school expectations, after which the teachers at this school expected that all students will follow the rules, and monitored the implementation and use of these rules. Teachers provided positive reinforcement when expectations were implemented correctly and intervened when more support was required. The results of the study showed that the social environment of the school was positively changed when a small number of rules were clearly communicated, appropriate behaviors were actively taught, positive reinforcement for appropriate social behaviors was increased, and when on-going monitoring rule violations were consistently corrected.

System for Monitoring. It is important that the school site establishes a system for monitoring and evaluating the process and progress of SWPBIS (Bradshaw et al., 2010; Ervin et al., 2007; Warren et al., 2006). An on-going

system for collecting and monitoring the data should be established by the leadership team (Bradshaw, Koth et al., 2008; Ervin et al., 2007; Luiselli et al., 2005; McCurdy et al., 2007; Taylor-Green et al., 1997; Warren et al., 2006) and analyzed to determine strengths and weaknesses (Sugai & Horner, 2002). Using data, the leadership team determines the needs within the school (Simonsen et al., 2007) to assist with the SWPBIS implemenation. As part of this system, the leadership team needs to define the types of behaviors that should be addressed in the classroom by the teacher and those that require that the student is sent to the office for disciplinary actions (Bradshaw et al., 2010) to create consistency with practice throughout the school, as well as to create consistent variables for collection.

Implementation of the System

In a case study conducted in Pennsylvania with two schools, an elementary school and a special school, it was determined that a school must have the following structures in place to be successful with implementation: school-wide agreement on common interventions, leadership from a team that is representative of the school community, shared vision, clear-consistent support, and commitment of resources such as time and training (George et al., 2007). To secure sustainable implementation, the following components are required to be implemented with fidelity, also known as integrity: establishing team leadership, developing long-term implementation action planning, obtaining staff commitment, and insuring active, strong leadership and support (Sugai & Horner,

2002; Walker et al., 1996). The staff has to identify and acknowledge that there is a problem with behaviors across the school (Stollar et al., 2006) making it a priority and goal to improve and address this concern through emphasis of teaching expected behaviors instead of providing consequences (Walker et al., 1996). This systemic implementation is guided by achieveable long-term goals endorsed by all students and staff that focus on the philosophy of prevention of at-risk behaviors, through using evidence-based practices and interventions, made through data-based decisions, including strong, on-going administrative support (Netzel & Eber, 2003; Simonsen et al., 2007; Sugai & Horner, 2006). The following six areas have consistently been identified as promoting or inhibiting the success of SWPBIS: administrator's support, staff commitment, philosophical differences, training for staff and for students, and implementation of a reward system (Kincaid et al., 2007).

The leadership team's focus needs to be on shifting the school culture so that the implementation can be sustainable (Netzle & Eber, 2003; Simonsen et al., 2007; Sugai & Horner, 2006). Having an understanding of the phases of implementation will help the leadership team support activities and build staff capacity to operationalize a program within the school system (Farrell, 2009; Netzle & Eber, 2003; Simonsen et al., 2007; Sugai & Horner, 2006). Elliott and Mihalic (2004) conducted a qualitative study through telephone interviews to determine what helps to make the implementation of SWPBIS successful. In their study they determined that school sites that received technical assistance

on-site, invested six to nine months to build capacity during the initial stage, and monitored implementation to provide needed training and support, were more successful than those that did not involve all of the named components (Elliott & Mihalic, 2004). The initial planning stage typically included needs assessment, implementation of an action plan and a determination as to how the program will be evaluated (Farrell, 2009).

In a study conducted with 467 schools in Maryland (247 elemenatry schools, 135 middle schools, and 52 high schools) key components of implemenation were identified (Barrett, Bradshaw, & Lewis-Palmer, 2008). These components consisted of team-based decision making, training, on-going data collection, external coaches providing four to five hours per month of assistance to the team with reviewing data, program planning, identifying resources, and coordinating local trainings (Barrett et al., 2008). A school system is ready to implement SWPBIS when behavior is one of the top three school improvement goals, 80% of the staff agree with the idea of implementing, and resources are set aside to support the required training and coaching to prepare the staff and students for implementing the process (Hawken et al., 2008; Sugai & Horner, 2006). Successfully embedding SWPBIS in the school culture takes five to ten years (Farrell, 2009; Hawken et al., 2008; Johns & Patrick, MODEL Program, March 2010; Sugai & Horner, 2004, p. 12). A more detailed description of the implementation of SWPBIS is provided below.

Leadership Team. During implementation of SWPBIS, the leadership team should be visible when providing coordination, political support, training, coaching, demonstrations, evaluations, and funding (George & Kincaid, 2008). It is important for the leadership to develop communication systems with other stakeholders in order to create visibility and ensure understanding of the plan (Ryndack, Reardon, Benner, & Ward, 2007). During the first year when the planning of the implementation is occuring, the leadership team needs to meet four to five hours each month. Once implementation has occurred, the commitment of time decreases to three to four hours each month to allow time to review and monitor data (Barrett et al., 2008). The leadership team coordinator should be responsible for scheduling the meeting and managing the data collection (Barrett et al., 2008).

Action Plan. To ensure sustainability, the leadership team needs to develop an action plan to guide the long process of implementing SWPBIS (Ervin et al.; 2007; Simonsen et al., 2007; Sugai & Horner, 2002). This action plan is a three to five year plan which encompasses the following areas: coaching, training, evaluation, policies, and funding (Horner & Sugai, 2004) to support staff with changing their beliefs to one that incorporate prevention to address inappropriate behavior (Sugai & Horner, 2002). To develop the action plan, the leadership team needs to consider the data collected to identify the needs within the community and school's current climate (McIntosh et al., 2010).

The action plan should include measurable outcomes, timelines and specific activities regarding staff development, training and implementation activities (Sugai & Horner, 2002). The plan should describe how and when the students will be directly instructed regarding expected behaviors and include how consistent reinforcement of appropriate behavior will be used. Interventions for violators need to also be addressed including active supervision, reminders, pre-correction and corrections (Oswald, Safran, & Johanson, 2005).

Staff Commitment. To have sustainability, a critical component of the implementation process is that the whole school system needs to embrace the philosophy and be willing to implement SWPBIS (Sugai & Horner, 2006). A common understanding and vision can be created by obtaining all staff members' consensus regarding the behavior expectations, their willingness to teach the expectations, place focus on reinforcing appropriate behaviors and use positive strategies instead of punitive means (Luiselli et al., 2005; Ryndak et al., 2007). Before SWPBIS can be implemented at a school site, 80% of the staff need to be in agreement and have behavior change as a priority (Ervin et al., 2007; Sugai & Horner, 2002). The leadership team will need to ensure all staff are fluent with skills and strategies to build agreement and support for SWPBIS (Sugai & Horner, 2002) in order to build internal ownership of the change (Ryndak et al., 2007). Ryndak et al. (2007) conducted a seven year long study on a school where SWPBIS was sustained over time, and found the following seven components were addressed by the staff:

- Common vision of defined outcomes was shared;
- Common understanding that the change process takes five to ten years and required commitment, consistency and coordination;
- Everyone owned the change process;
- A variety of efforts incorporated;
- All constituents actively participated;
- The constituents represented the community; and
- Coaching was provided.

The emphasis was on establishing a team approach to implement SWPBIS (Simonsen et al., 2007).

Administrator's Support. Administrative support is a necessary component for SWPBIS to be sustainable. The leadership team can work with the staff to implement the process, but without administrative suport at both the site and district level, it will be nothing more than a fad. This section will describe the function of the administrator's support for successful implementation and maintenance of SWPBIS.

Site level. The most important person on the school site to provide support with the implementation of SWPBIS in order to ensure sustainablity is the site prinicipal (Ervin et al., 2007; Luiselli et al., 2005; Stollar et al., 2006; Warren et al., 2003). In their research on successful implementation of SWPBIS, Elliot and Mihalic (2004) noticed the following traits were common amongst the school administrator:

- The site administrator provided support through resources such as needed funds and time for developing relationships, securing personnel and planning (Handler et al., 2007), including trainings, policies, and political support (Sugai & Horner, 2002; Sugai & Horner, 2006) to build capacity amongst the leadership team, as well as other school staff members (Sugai & Horner, 2004).
- The site administrator created sustainable changes at a school site by providing strong, visible support of the site leader (Bradshaw et. al., 2010; McIntosh, Campbell, Carter, & Dickey, 2009; Riehl, 2000; Ryndak et al., 2007).
- The site administrator helped plan and support implementation by modeling expected behaviors during meetings and trainings, as well as reinforcing staff behaviors (Handler et al., 2007).
- The recommendation is for the leader of the school to support the teachers by having high expecations regarding the type of appropriate behaviors of the students (Riehl, 2000).

In order for SWPBIS to be implemented and sustained, the site administrator must be supportive and have SWPBIS as one of the school's goals (Sugai and Horner, 2006; Warren et al., 2003). To help change the school culture, the administrator needs to be knowledgeable about the SWPBIS process and practices and expect a change in both students' and teachers' behaviors, (Handler et al., 2007). The administator can show his/her support of the staff

with the implementation of SWPBIS by providing to the staff the necessary training and coaching required to assure successful implementation and encourage appropriate student behaviors (Sugai & Horner, 2002).

District level. In order to implement SWPBIS systemically, the school site and staff must obtain political support from the school district's board of education, superintendent, and cabinet as well as the families within the community the school site serves. The support from both school site and district administration must be active and visible (Handler et al., 2007; Lassen et al., 2006, p. 174; Sugai & Horner, 2006). It is important to recognize that support from the district office can either assist or delay the initiation of the SWPBIS (Handler et al., 2007). One of the factors that may affect obtaining the multi-year commitment from the district office is the success with past initiatives or competing initiatives that are priorities at the district office level (Handler et al., 2007). The support provided by the district office administration may include funding or establishing supporting discipline policies.

Training. In order to assure successful implementation of SWPBIS, it is important to ensure staff are highly skilled and trained (Sugai & Horner, 2002). The training provided to the leadership team, as well as the full school staff, needs to be more than just a one-time presentation, but needs to be on-going support in the form of technical assistance and coaching (Simonsen et al., 2007; Sugai & Horner, 2002; Sugai & Horner, 2006). External coaching may be obtained through a university (Taylor-Green et al., 1997), state department of

education (Barrett, Bradshaw, & Lewis-Palmer, 2008), or local school districts. Ryndak et al. (2007) refers to the coaches as *external friends*. The coaches support the leadership team with their development of positive behavior expectations and a reward system, creating lesson plans for teaching the expectations in all settings of the school to all students, as well as providing on-going specialized training (Warren et al., 2006).

A three year study that included 100 elementary schools from Illinios and 100 from Hawaii was conducted to determine the effects coaching has on implementation (Horner et al., 2009). In each state, the state department of education provided half the schools with coaching during implementation and delayed support to the control group. The schools who received technical support through the coaching process had more success with fidelity of implementation as measured with the School-Wide Evaluation Tool (SET) as shown in Horner's 2009 study. The average score on the SET prior to training was (T1, .381); post training from state coaches the scores were (T2, .785) and (T3, .823) respectively. A school is considered to have implemented the primary practices of SWPBIS when the overall SET score is 80%.

Consultants can work with school sites in various ways to provide technical skills and motivation (Handler et al., 2007). For example, an Ohio Middle School worked with consultants from a university (Oswald, Safran, & Johanson, 2005). The consultants used surveys and collaborated with staff to identify implementation needs and priorities and provided multiple workshops to

address the areas (Oswald et al., 2005). The consultants also provided the leadership team support with developing the action plan. In an implemenation study conducted with preschools, elementary schools, middle schools and high schools in New Hampshire, one year after receiving training on SWPBIS, the schools that also received coaching during the implementation stage were successful with implementation; 15 out of 28 schools (54%) scored 80% or higher on the SET (Muscott et al., 2004, p. 465).

In Maryland, a study was conducted with thirty-seven elementary schools to determine the impact formal training has on the fidelity of implementation of SWPBIS. In this study, twenty-one elementary schools received formal training and sixteen were delayed (Bradshaw, Reinke et al., 2008). The trained leadership teams and teachers were more successful with defining and teaching behavior expectations, managing, monitoring and evaluating the implemenation of SWPBIS, as well as obtaining district-level support (Bradshaw, Reinke et al., 2008). The study showed leaders at individual school sites who had received training and had coaches that provided frequent checks and feedback on progress of implementation, were able to implement SWPBIS with fidelity within one year as measured with the SET and the average overall implementation score for all schools was over 80% (Bradshaw, Reinke et al., 2008). Fidelity is reached when each component of SWPBIS is implemented with accuracy and fluency (Sugai & Horner, 2006; Sugai & Horner, 2008). In reviewing the

research, school staff are successful with implementing SWPBIS with fidelity when a coach provides on-going supports.

Review of Data. Multiple measures should be used by the leadership team to monitor the pattern and trends of the effectiveness of SWPBIS implementation (Barrett, Bradshaw, & Lewis-Palmer, 2008). The use of data serves three purposes. The first purpose is to guide the leadership team with developing a plan for implementation (Mass-Galloway et al., 2008; Taylor-Green et al., 1997; Warren et al., 2006). The second one is to use the data to monitor the implementation and effectiveness of SWPBIS and determine what changes need to be made to ensure successful implementation (Lassen et al., 2006, p. 704; Luiselli et al., 2005; McIntosh et al., 2010; Metzler et al., 2001, p. 475; Sugai & Horner, 2002, p. 33; Sugai & Horner, 2006; Warren et al., 2006, p. 189). Also, once SWPBIS is implemented, it is important to monitor the efficiency of the program and share findings with staff and students to create long-lasting effects (Luiselli, Putman, & Sunderland, 2002, p. 185). The third purpose of data is to identify students at-risk of problem behavior through frequent reviews of data in order to provide interventions before the behavior becomes more severe (Freeman et al., 2006).

Evaluation tools. It is imperative that the staff reviews the implemenation of SWPBIS periodically to ensure it is being implemented as planned (Simonsen et al., 2007; Sugai & Horner, 2004, p.12). This step is important in order to create systemic change in the culture (Sugai & Horner, 2004, p. 12). The

purpose of the SWPBIS evaluation tools is to systematically review the implementation of SWPBIS and provide feedback on which components the school staff have successfully implemented or still need to implement, including any required support (Handler et al., 2007; Sugai & Horner, 2006). Based on the data collected and analyzed, the leadership team can monitor and make appropriate changes regarding next steps with implementation, such as revising the action plan or providing more staff training for a particular area. Making data-driven decisions helps to support the sustainablity of SWPBIS because problems are identified and addressed before they worsen (Sugai & Horner, 2006).

Multiple measures should be used to monitor the implementation of SWPBIS to assist with effectiveness, fidelity of the implementation and sustainability (Barrett, Bradshaw, & Lewis-Palmer, 2008). There are various tools available to assist the leadership team with monitoring. Sugai and Horner (2002), recommend using implementation checklists to monitor the implementation of SWPBIS. Below is a description of various tools that can be used for monitoring.

To annually monitor overall implementation, Sugai, Lewis-Palmer, Todd & Horner have developed a tool called the School-Wide Environment Test (SET; 2005). Florida's Department of Education has also developed the Benchmark of Quality (BoQ; Cohen, Kincaid, & Childs, 2007). To test reliability and validity of the SET, 45 schools were trained and observed using the tool (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2004). The SET monitors implementation

and provides information to help determine SWPBIS components requiring further support and training. The SET reviews the following SWPBIS components: defining and teaching of behavioral expectations, the development of a system to reward appropriate behaviors and a system for responding to inappropriate behaviors, as well as the management of monitoring and evaluationg data and district support (Bradshaw, Reinke et al., 2008). The fifty-three items of the BOQ monitor the fidelity of implementation and focus on the following critical components: team commitment, effective discipline procedures, data entry, expectations and rules, reward system, lesson plans, implementation plan, crisis plan and evaluation (Cohen et al., 2007). The BOQ was tested by 34 schools in Florida and 13 schools in Maryland and it was determined to be a more sensitive instrument than the SET and covers more components (Cohen, Kincaid, & Childs, 2007).

Both tools provide feedback on which components of SWPBIS the school staff has successfully implemented or which require more support (Handler et al., 2007; Sugai & Horner, 2006). To support the sustainablity of SWPBIS, the team needs to analyze the information from these tools in order to revise the action plan, including specific staff training. The leadership team systematically monitor the implementation data and make appropriate changes to address problems before they become epidemic (Sugai & Horner, 2006).

To assist the leadership team with determining the site capacity for implementing SWPBIS, the twenty-six item Team Implementation Checklist (TIC;

Sugai, Horner, & Lewis-Palmer, 2009) is available. This checklist can also be used monthly to monitor progress. The items are completed by the leadership team to determine where to focus and conduct work within the action plan (Barrett, Bradshaw, & Lewis-Palmer, 2008). To assist coaches with providing assistance to the leadership team during the first year of implementation, a thirteen item Coaches Implementation Checklist (Barrett, Lewis-Palmer, & Sugai, 2004) is completed monthly by the coach (Barrett, Bradshaw & Lewis-Palmer, 2008). During the second and third year of implementation, the same checklist is completed quarterly by the coach to continue to provide guidance to the leadership team (Barrett, Bradshaw, & Lewis-Palmer, 2008).

To determine the level of implementation of SWPBIS within the school site, the Implementation Phase Inventory (IPI; Bradshaw, Barrett, & Bloom, 2004) is available. This tool consists of forty-four items that combines questions from the SET, Coaches Checklist, and Team Implementation Checklist, to document the specific phase of implementation of SWPBIS, with a goal of guiding the leadership team to obtain maintenance and sustainability (Barrett, Bradshaw, & Lewis-Palmer, 2008). After analyzing 505 IPIs, the researchers noticed a significant association beween the phase of implementation of SWPBIS a school site has achieved and the fidelity of the program (Bradshaw, Debnam, Koth, & Leaf, 2009).

There are tools for even individual staff members to complete. One such tool is the Effective Behavior Support (EBS; Sugai, Horner, & Todd, 2003) which

is a self-assessment that focuses on the staffs' perspective of the implementation process. EBS is broken into the following four sections: school-wide systems, nonclassroom setting system, classroom systems and individual student systems (Safran, 2006). The researcher reviewed the responses of 80 participants from three elementary schools and one middle school in Ohio and found that the EBS measured the current status of SWPBIS (α = .85) as well as prioritizing the area of improvement (α = .94).

Another tool is the Self-Assessment and Program Review (SARP) which is first completed by individual leadership team members and then reviewed as a group to compile the scores (Walker, Cheney, & Stage, 2009). The researchers studied 23 schools who had leadership teams with six to eight members (N =150) and concluded the results obtained from the group were more accurrate than the individual scores (Walker, Cheney, & Stage, 2009). The tool reviews the following components of SWPBIS: policy and procedures, prevention and screening, staff development, behavioral expectations, response to discipline referrals, academic and social supports provided, functional behavior assessments, data collection and analysis, families as partners, and comprehensive intervention plan (Walker, Cheney, & Stage, 2009). The score on the SARP increases as more components of SWPBIS are successfully implemented.

This study further compared SARP scores with office discipline referrals and showed as SARP scores increased, the number of office discipline referrals

decreased. Four schools with a total SAPR score of 80% or above (strongly in place) had a mean ODR per 100 students of 40, where nine schools with a total SAPR score of 69% to 79% (moderately in place) had a mean ODR per 100 students of 75, and ten schools with a total SAPR score of 44% to 68% (partially in place) had a mean ODR per 100 students of 95 (Walker, Cheney, & Stage, 2009, p. 104). As SWPBIS is implemented by more states and school districts, tools based on the ones listed above, are being developed to meet the unique, local needs (see www.modelprogram.org).

Office discipline referrals. One commonly used and easily avaliable form of data to monitor SWPBIS is office discipline referrals (ODR). Office discipline referrals can be used to monitor multiple variables. According to Hawken, Vincent, and Schumann (2008), the data from ODRs can be used to monitor the implementation of SWPBIS. It also has been determined that ODRs are sensitive (Sugai, Sprague et al., 2000) and can be used to monitor school climate (Warren et al., 2006) or identify students with "at-risk" behaviors (McIntosh, Chard, Boland, & Horner, 2006). ODRs can also identify types of behavior problems the school needs to address, as well as the location of where behavior problems are pervasive (Walker, Cheney, Stage, Blum, & Horner, 2005).

ODRs are additionally used for measuring outcomes, the impact of implementation of SWPBIS (Barrett et al., 2008; Warren et al., 2006) and the efficacy of SWPBIS in addressing behavior concerns (Walker et al., 2005). ODRs should be reviewed at least once per quarter if not once per month

(Luiselli et al., 2005; Sugai & Horner, 2006) to assess the school's discipline needs and the effect of SWPBIS reform on the school's climate (Sugai, Sprague et al., 2000).

The data can be reviewed in various ways to determine the next target behavior or area the staff needs to focus on. Sugai & Horner (2002) suggest ODRs be sorted by minor and major infractions for ease of tracking and analyzing. The data can be reviewed by looking at multiple variables such as time of day referrals are made, the location of the incidents, types of inappropriate behaviors being demonstrated, staff members making referrals, specific students being sent to the office, as well as the time of year incidents are occurring (Luiselli et al., 2005; Sugai & Horner, 2006; Sugai, Sprague et al., 2000; Taylor-Green et al., 1997). This information should be presented for review in a format that is easy to analyze such as charts or graphs (Johns & Patrick, March 2010).

A case study was conducted in upstate New York with preschools and elementary schools. The leadership teams from these schools used ODR data to identify and prioritize areas that required revision within the action plan as well as which students needed further support with interventions (Clonan et al., 2007). Reviewing the ODR infractions helps the leadership team determine which infractions should be considered minor, and handled within the classroom by the teacher from those that are major and require intervention from the administration (Sugai & Horner, 2006). ODRs are appropriate and useful for

monitoring the school's behavioral climate and, to identify the behavior supports needed within the school as well as the effectiveness of the behavior interventions being provided (Irvin et al., 2004).

The data from universal screenings should be used to identify which students require support before behaviors become intense (Sugai, 2007). Sugai (2007) recommends that behavior data be analyzed at least monthly, if not weekly to ensure early interventions. Office discipline referrals are a good screening tool for both identifying students who need more support, as well as identifying the behavioral challenges and the location impeding the school (Hawken, Vincent, & Schumann, 2008). Other data that should be reviewed are attendance, tardies, suspensions, and expulsion data (Sugai & Horner, 2002).

Implementation Barriers. In Southern Illinois, a study on implementation of SWPBIS was conducted using a convenience sample (Chitiyo & Wheeler, 2009). The participants in this level study included nineteen general education and two special education teachers who were trained on the principles of SWPBIS. They developed and taught the students the following three expectations: respect property, respect others, and respect yourself.

The researchers were interested in determining what component of SWPBIS was most difficult for teachers to implement. Using a seven point Likert-scale survey and three open-ended questions, data was gathered. With the open-ended questions, teachers identified the following as barriers: lack of time, inadequate training, lack of consistency amongst staff, lack of resources,

lack of administrative support in general, and lack of administrative support with data collection and monitoring the implementation process (Chitiyo & Wheeler, 2009).

On the Likert-scale portion of the survey, teachers felt that the use of functional assessments (M = 4.19) is the most difficult to implement, however this affects only 1%-5% of the student population (Chitiyo & Wheeler, 2009). Other areas that were identified are: time constraints (M = 5.29), availability of resources for teachers (M = 4.95), teaching alternative behaviors (M = 4.70), collaboration with others (M = 4.43), establishing shared values (M = 4.13), and collecting and interpreting data (M = 3.95; Chitiyo & Wheeler, 2009). The results from this study demonstrate the importance of securing administartive support, training staff and staff buy-in prior to implementation (Chitiyo & Wheeler, 2009).

In Florida, a survey was conducted with 70 participants to determine what they believe are barriers to the implementation process (Kincaid et al., 2007). It was determined that both schools considered successful implementers and schools that are not successful are faced with the same barriers and challenges with implementing SWPBIS (Kincaid et al., 2007). Both types of schools generated the following barriers: staff commitment (17), staff implementation of reward systems (9), and collection and interpretation data (9); (Kincaid et al., 2007). The difference between the two types of schools was the staff's resiliency and how they chose to work through the barriers.

Results of Implementing School-Wide Positive Behavior Interventions and Supports

With many states and school districts throughout the nation implementing SWPBIS, there have been many studies conducted on the effects of the interventions on school systems. Some of the studies have examined the effects on reduction in behavior problems, school climate, student attendance, and academics. Below is a review and findings of some of these studies.

Reduction in Behavior Problems

Many studies have been conducted to determine the effects the implementation of SWPBIS had on discipline. The research has shown a decrease in the number of ODRs (Luiselli et al, 2005; Talylor-Green et al., 1997) and suspensions (Bradshaw et al., 2010). Research has shown schools that systematically implemented school-wide positive behavior interventions and supports decreased the number of office discipline referrals (Mass-Galloway et al., 2008; Taylor-Green et al., 1997) by 50% (Irvin et al., 2004) and increased the amount of time administrators can spend as instructional leaders, as well as allowed classroom teachers more time to instruct. In a middle school, as positive reinforcement increased, discipline referrals to the office decreased by over 41% (Metzler et al., 2001). In a study conducted with 465 K-12 schools, ODRs were used to monitor the impact coaching had on the fidelity of implementation, and showed a decrease in discipline problems at all levels (35 high school decreased by 37%; 135 middle schools decreased by 33%; 237 elementary schools decreased by 43%; Barrett, Bradshaw, & Lewis-Palmer, 2008). This research

also showed a reduction in suspensions, but the authors suggested further investigation be conducted in this area (Barrett et al., 2008).

Over a two to three year span, with seven elementary schools in the Pacific-Northwest that implemented SWPBIS with fidelity, the office discipline referrals were tracked as a means to gather data to determine the effects of SWPBIS (Nelson, Martella, & Marchand-Martella, 2002). In the study, one of the areas the researchers reviewed was ODRs, documentation of suspensions and emergency removals (i.e. expulsions) and determined that administrators at these schools were spending less time on discipline issues (Nelson et al., 2002). In two other studies conducted with elementary school students, when they were taught behavior expectations, playground problems decreased (Lewis, Powers, Kelk, & Newcomer, 2002; Luiselli et al., 2002). In a four-year study conducted with four elementary schools, after implementation of SWPBIS, ODRs went down from 547 per year to 282 per year, which represents 50% less time out of class (Ervin et al., 2007). To calculate this based on a seven hour school day, during the baseline year students were out of class an equivalent to 41.2 days compared to 20 days four years after implementation of SWPBIS (Ervin et al., 2007).

In a case study conducted over a three year period with urban middle schools, ODR data was used to monitor behavior and climate, along with SET scores to determine if the school sites implemented SWPBIS. In schools considered to have implemented, there was a decrease in ODRs and

suspensions over the three year period (Lassen, Steele, & Sailor, 2006). In the baseline year, the number of ODRs the students were receiving ranged from 0-35 (M = 5.22) and by year three the range decreased to 0-23 (M = 3.70). Similar results were found with suspensions, where the number of suspensions students received in the baseline year was 0-5 (M = 0.32) and year three the number went down to 0-3 (M = 0.20).

Inclusionary

SWPBIS changes the school's internal discipline practices and system (Bradshaw et al., 2010) and provides students with the opportunity to identify and practice appropriate behaviors because staff are taking time to teach positive expectations and responses to difficult situations instead of excluding the students (McIntosh et al., 2010). The focus is on acknowledging appropriate behaviors and not on providing consequences for inappropriate behaviors (McIntosh et al., 2010). In a middle school in Massachusetts, a four year longitudinal study was conducted to review the impact SWPBIS had on antisocial behaviors when alternatives to detention were employed (Luiselli et al., 2002). The findings from this study showed that there was a decrease in anti-social behavior, defined as vandalism, substance abuse and disruptive-antisocial behaviors, from 1,326 (baseline year) to 599 (year 4), an over 50% decrease (Luiselli et al., 2002) due to the students being taught appropriate social expectations and provided supportive interventions as needed.

Positive Impact on School Culture. The success of SWPBIS is contingent on the ability to establish a caring environment where there are supportive relationships between adults and students (Mass-Galloway et al., 2008, p. 133). Bradshaw, Koth, Bevans, Ialongo & Leaf (2008, p. 463) defined school climate in affiliation with warm and positive interactions amongst staff and with students. Relationships between the students and teachers are created through school-wide positive behavior interventions and supports. This is an important component of SWPBIS because when students do not feel connected to school or satisfied they will misbehave and receive more reprimands and consequences (Baker, 1999). Creating these connections is done by teachers taking the time to teach the students the expected behaviors. In doing this, teachers are showing they care about the needs of the students. Another way connections are developed is by teachers having more positive interactions with the students, such as greeting the student at the door or having a positive conversation with students instead of only interacting by reprimanding. When students feel like a teacher knows and cares about them as people and not just as a student, they prefer that teacher (Rodriguez, 2008, p. 441). Recognition has the power to keep students connected to school.

These positive interactions between the staff and students also help with school climate. School climate is measured by how staff, students and families perceive the school as being safe. The interactions between teachers and students impact classroom dynamics which are important and complex in

shaping and influencing school climate (Koth, Bradshaw, & Leaf, 2008; Rodriguez, 2008). If students perceive the staff not liking or wanting them in school, this can negatively impinge on the functioning of the school, as well as the students' sense of safety (Mattison & Aber, 2007).

In various case studies where tiered interventions were implemented, the number of office discipline referrals decreased as positive interactions between staff and students increased (Netzles & Eber, 2003; Turnbull et al., 2002). In reviewing the effects of SWPBIS on how students perceive safety at school, middle school students were surveyed. SWPBIS was implemented over a two year period of time. During this time, there was an increase in the sense of feeling safe (6^{th} grade baseline 59.3% to 75.6%, an increase of 27.5%; 7^{th} grade baseline 56.4% to 69%, an increase 22.3%) and, harassment decreased by 45% (Metzler et al., 2001).

With SWPBIS positive behavior expectations established, taught and reinforced, problem behaviors were reduced, creating improved school climate and increased perception of safety (McIntosh et al., 2010). SWPBIS teaches students social competencies and improves their interactions and relationships with teachers (McIntosh et al., 2010). Twelve teachers in the Southwest Region of the nation reported on a self-assessment that off-task behaviors were significantly better in class after SWPBIS was implemented compared to classes where the program was not being used (Algozzine & Algozzine, 2007). When SWPBIS is implemented at the classroom level, students are active learners and

demonstrate on-task participation, creating a positive learning environment (Algozzine & Algozzine, 2007).

Organizational Health. In a longitudinal study with thirty-seven elementary schools from Maryland, the organizational health improved as the staff's perception became more positive (Bradshaw, Koth et al., 2008). The training in SWPBIS seemed to make school's work environment friendlier, positive, and collaborative (Bradshaw, Koth et al., 2008).

As an example, an Ohio middle school with 950 students implemented a multifaceted intervention that included positive practice, pre-correction, verbal praise, reinforcement, corrections, and active supervision. When middle school students were taught expected behaviors, problem behaviors decreased by over 42% (Oswald, Safran, & Johanson, 2005). The effects of SWPBIS also influenced the daily lives of students by providing a safer school and improving the environment for learning (Oswald, Safran, & Johanson, 2005).

Academics

With SWPBIS established in the school, student behaviors and school climate improved (Bradshaw et al., 2010; Metzler et al., 2001; Sugai and Horner, 2006), and the resultant climate supported student engagement in learning and an increase in academics (Bradshaw et al., 2010; Horner et al., 2009; McIntosh et al., 2010; Scott & Barrett, 2004). As earlier introduced, Nelson's (2002) study reviewed seven elementary schools from the Pacific-Northwest that implemented SWPBIS and showed a decrease in discipline problems. Also reviewed in the

study was student-level academic achievement. The findings showed an increase in student achievement in the area of language arts, but in the area of math the increase was not statistically significant (Nelson et al., 2002). The researchers believed the increase in student achievement was due to the new learning environment established through SWPBIS which allowed students to engage appropriately in learning within the classroom setting (Nelson et al., 2002). In a study of an urban elementary school, after implementation of SWPBIS, math scores increased by 25% and reading scores by 18% (Luiselli et al., 2005, p. 189). Staff from thirty-seven elementary schools from Maryland, reported a positive perception of academic growth, possibly enhanced by more control with behavior management and more time to focus on teaching (Bradshaw, Koth et al., 2008, p. 469).

In a different study conducted with urban middle school students, a negative correlation was demonstrated between high numbers of ODRs and academics. The students with zero ODRs scored higher in math and reading on the state assessments (Lassen, Steele, & Sailor, 2006). In a three year study with urban middle schools that implemented SWPBIS, the positive approach of providing rewards for appropriate behaviors decreased problem behaviors and increased academic achievement because fewer students were losing instruction time due to ODRs and suspension (Warren et al., 2006). Through a regression model, Lassen (2006) looked at the effects of ODRs on academic achievement and the findings showed that 1%-2% of the variance in academic scores can be

explained by the number of ODRs a student has received. Even though these findings show a negative relationship, the researchers suggested that additional research needs to be conducted in relation to the effects of SWPBIS on academics (Lassen et al., 2006), with an increased focus on determining the relationship between implementation of SWPBIS continuum of behavior interventions and student achievement (Sugai & Horner, 2006; Warren et al., 2006). Sugai and Horner (2008) have suggested that there is a strong link between behavior and academics. The authors also suggested that long-term sustainability needs to be explored within large organizations such as a school district (Sugai & Horner, 2008).

Purpose of the Study

Site principals and district administrators are faced with mandates to increase student achievement. SWPBIS should help address this need by creating and sustaining comprehensive systems of behavioral supports that prevent disruptive behaviors and enhance the school's organizational climate (Bradshaw, Reinke et al., 2008). When students are in control of their behavior, the teacher is able to focus on teaching and students in the classroom can remain on-task, increasing student achievement (Algozzine & Algozzine, 2007; Lassen et al., 2006, p. 705; Warren et al., 2006, p. 196). When school sites implement SWPBIS, a change occurs in the way staff respond to problem behaviors affecting the school's culture. Typically there is a shift from dealing

with inappropriate behaviors through coercion and exclusion, to a focus on building relationships and teaching appropriate social responses (Warren et al., 2003, p. 86). Focusing on inclusionary practices should help increase the amount of time students remain in class and participate in instruction, which will improving learning as measured by state achievement tests (Warren et al, 2003).

> It is reasonable to expect that decreased behavior problems will correspond with increased academic achievement; with fewer students losing instruction time due to office referrals and suspensions, and with less class time being sacrificed in responding to behavioral issues, opportunities for instruction and learning should be increased. Particularly in schools with high base-rates of problem behavior, evidence that school-wide PBS approaches help improve academic performance will provide increased justification for allocating funds toward school-wide PBS initiatives. (Warren et al., 2006, p. 196)

In many of the studies conducted in the past, the main focus has been on school climate and the reduction of office discipline referrals. A few studies have incorporated academics. Of the studies that have examined the effects of SWPBIS on academics, many have been conducted at the elementary level with a few at the middle school or high school. Most studies involved single school sites. However, when more than one school site is reviewed, the comparison is across a state or nation and not within the same school district to help control for

variables of differences in community and governance. In many studies, the average time frame is two to three years. Most of the studies have been conducted in the Mid-West, Pacific-Northwest, South-Eastern or Eastern section of the nation; but none have been conducted in Southern California.

Even though many studies have established an increase in student achievement, many questions still remain unanswered regarding long-term effects of SWPBIS on student achievement. This leads to several important questions that this study addresses.

1. In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, do truancies decrease, and does this continue over time once the program is fully implemented?
2. In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, does the number of office discipline referrals (ODRs), suspensions, and expulsions decrease, and does this continue over time once the program is fully implemented?
3. In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, does the mean scale scores of the English-language arts (ELA) section on California Standard Test (CST)

increase, and does this continue over time once the program is fully implemented?

4. In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, does the mean scale scores of the math section on California Standard Test (CST) increase, and does this continue over time once the program is fully implemented?
5. Is there a difference in academic achievement between schools that have fully implemented all the components of school-wide positive behavior interventions and supports (SWPBIS) compared to schools that have not?

CHAPTER THREE

METHODS

Introduction

This section of the research study will include the research design, the target population, measurements, data collection methods, and data interpretation. The emphasis of this study was to determine whether implementing school-wide positive behavior interventions and supports affected academic achievement of middle school students. The study investigated eight Southern California middle schools from one district where in 2005 the implementation of a SWPBIS program was mandated.

Design

Multiple baseline graphs were used to interpret and analyze trend lines. Successive years of data were used to determine the effects of the implementation of school-wide positive behavior interventions and supports (SWPBIS) on academic achievement and behaviors amongst middle school students. The following achievement scores were examined: California Standards Tests (CST) Mean Scale Scores for English-language arts and math for each school. The data was obtained from California Department of Education's (CDE) website. Other outcome variables, including student truancy, suspension and expulsion data were also obtained from CDE's website.

The study reviewed the effects SWPBIS has on academic achievement, truancy and discipline when the components are fully implemented. The literature defines fidelity as implementing with integrity each component of SWPBIS which included establishing a leadership team, developing a long-term implementation action plan, obtaining staff commitment, and insuring active, strong leadership and support (Sugai & Horner, 2002; Walker et al., 1996).

Participants

An urban Southern California school district with an enrollment of over 50,000 students participated in this study. The focus of this study was on the middle schools programs within the district. The district has ten middle schools, but only eight middle schools were included in the study, and two schools were excluded. One school was excluded because it is considered a college preparatory magnet school that has an application process for enrollment, and upon acceptance, parents and students sign an agreement that the student will not be a behavior problem, will maintain a high grade point average and will regularly attend school. The other school was excluded from the study because it opened in 2008 so longitudinal data was not available. Table 1 provides the demographic data for the eight middle schools included in the study. Even though School B did not open until the 2005-06 school year, it was included because it opened the same year as the district SWPBIS mandate was implemented.

Table 1

Demographic Data

School	Ethnicity	03-04 *N* (%)	04-05 *N* (%)	05-06 *N* (%)	06-07 *N* (%)	07-08 *N* (%)	08-09 *N* (%)	09-10 *N* (%)
A	Enrollment	2261	2157	1334	1233	1151	1274	1168
	Hispanic	(69.8)	(72.8)	(75.7)	(73.9)	(76.6)	(78.7)	(78.9)
	Afric. Amer.	(18.5)	(17.3)	(16.6)	(17.6)	(16.2)	(14.9)	(15.0)
	White	(8.8)	(6.8)	(5.1)	(5.2)	(5.0)	(4.3)	(3.9)
	Other	(2.9)	(3.1)	(2.6)	(3.3)	(2.2)	(2.1)	(2.3)
	SES	(86.8)	(92)	(86.3)	(86.9)	(92.8)	(93.4)	(96.5)
	EL	(28.0)	(33.6)	(36.4)	(39.3)	(40.4)	(40.0)	(40.2)
B	Enrollment			1265	1376	1385	1095	1054
	Hispanic			(69.7)	(71.9)	(73.1)	(72.7)	(71.9)
	Afric. Amer.			(8.9)	(9.4)	(9.2)	(8.4)	(8.8)
	White			(17.5)	(14.0)	(12.9)	(15.3)	(15.7)
	Other			(3.9)	(4.7)	(4.8)	(4.1)	(3.7)
	SES			(76.8)	(74.7)	(77.5)	(76.3)	(85.5)
	EL			(34.6)	(37.5)	(29.5)	(24.9)	(34.9)
C	Enrollment	1347	1415	1364	1357	1296	1113	1006
	Hispanic	(65.9)	(67.5)	(74.7)	(74.1)	(75.6)	(79.1)	(78.7)
	Afric. Amer.	(20.0)	(19.1)	(15.0)	(16.1)	(14.5)	(12.7)	(12.7)
	White	(9.4)	(8.4)	(6.9)	(6.3)	(6.4)	(4.9)	(4.9)
	Other	(4.7)	(5.0)	(3.4)	(3.5)	(3.5)	(3.3)	(3.7)
	SES	(98.3)	(96.5)	(93.5)	(90.9)	(94.7)	(96.1)	(97.2)
	EL	(32.4)	(34.6)	(38.4)	(40.2)	(37.5)	(37.5)	(39.6)
D	Enrollment	1519	1700	1746	1746	1572	1134	1058
	Hispanic	(51.2)	(56.0)	(58.8)	(62.1)	(63.6)	(67.7)	(64.4)
	Afric. Amer.	(27.6)	(25.6)	(23.0)	(23.0)	(22.5)	(21.2)	(23.3)
	White	(16.5)	(13.8)	(13.2)	(10.3)	(9.4)	(7.6)	(8.5)
	Other	(4.7)	(4.6)	(5.0)	(4.6)	(4.5)	(3.5)	(4.0)
	SES	(84.1)	(91.9)	(90.4)	(87.6)	(89.2)	(92.9)	(95.7)
	EL	(17.8)	(22.6)	(25.7)	(28.6)	(27.0)	(28.3)	(27.7)
E	Enrollment	1406	1372	1399	1281	1381	1206	1171
	Hispanic	(57.1)	(64.1)	(62.9)	(62.2)	(64.4)	(67.2)	(67.6)
	Afric. Amer.	(18.7)	(14.4)	(14.4)	(15.9)	(15.8)	(15.6)	(16.4)
	White	(21.2)	(18.0)	(17.9)	(17.0)	(16.2)	(14.2)	(12.6)
	Other	(3.0)	(3.5)	(4.8)	(4.9)	(3.0)	(3.0)	(3.4)

	SES	(77.8)	(80.8)	(78.0)	(77.7)	(78.6)	(80.8)	(84.7)
	EL	(15.7)	(20.0)	(24.7)	(24.3)	(22.7)	(23.1)	(21.1)
F	Enrollment	1442	1442	1228	1126	983	1021	989
	Hispanic	(59.5)	(66.3)	(68.2)	(72.5)	(70.0)	(73.0)	(73.1)
	Afric. Amer.	(30.2)	(25.0)	(25.6)	(20.7)	(22.8)	(21.2)	(21.6)
	White	(5.4)	(4.4)	(3.7)	(3.4)	(3.2)	(2.8)	(2.4)
	Other	(5.8)	(4.3)	(2.5)	(3.4)	(4.0)	(3.0)	(2.8)
	SES	(89.5)	(91.4)	(88.5)	(84.5)	(91.4)	(93.2)	(94.4)
	EL	(32.5)	(34.6)	(31.2)	(33.9)	(29.4)	(28.6)	(29.9)
G	Enrollment	1292	1343	1241	1197	1168	959	914
	Hispanic	(50.5)	(54.9)	(53.8)	(57.8)	(59.5)	(57.0)	(59.2)
	Afric. Amer.	(20.7)	(18.5)	(20.1)	(18.1)	(18.2)	(19.0)	(18.4)
	White	(23.8)	(21.8)	(20.5)	(18.1)	(16.1)	(18.1)	(15.2)
	Other	(4.8)	(4.8)	(5.6)	(6.0)	(6.2)	(5.9)	(7.2)
	SES	(73.2)	(76.2)	(74.4)	(68.3)	(77.4)	(83.1)	(84.4)
	EL	(18.0)	(21.0)	(21.9)	(23.3)	(23.5)	(22.6)	(22.6)
H	Enrollment	1840	1884	1646	1578	1485	1202	1155
	Hispanic	(60.6)	(63.6)	(64.8)	(68.2)	(70.6)	(70.2)	(70.8)
	Afric. Amer.	(14.0)	(14.4)	(18.8)	(17.0)	(15.8)	(14.6)	(15.8)
	White	(20.9)	(17.3)	(10.9)	(10.6)	(9.6)	(11.5)	(10.0)
	Other	(4.4)	(4.7)	(5.5)	(4.2)	(4.0)	(3.7)	(3.3)
	SES	(76.6)	(77.8)	(85.8)	(81.3)	(81.8)	(80.2)	(86.1)
	EL	(23.7)	(23.6)	(26.0)	(28.6)	(32.0)	(27.4)	(27.3)

(CDE[a], 2010)

As can be seen by the demographic data listed in Table 1, the student populations of each school is made up of ≥ 80% ethnicities that are considered minorities. In each school, > 75% of the students are considered to be from a lower socio-economic status (SES) household with a large majority of the schools having > 85% of the student population in this category. In this study, low SES was defined using California Department of Education (CDE[a], 2010)

definition, which is based on the number of students receiving free and/or reduced lunches.

About a quarter of each school's population are considered English learners (EL). Overall, the demographics of the students attending the schools in this study are similar to schools throughout Southern California as well as other urban areas throughout the nation. Past research has demonstrated that SWPBIS has a positive effect on behavioral problems no matter the level, elementary (Lassen, Steele, & Sailor, 2006), middle school (Luiselli, Putman, & Sunderland, 2002), and high school (Morrissey, K. L., Bohanon, H., & Fenning, P., 2010), or the location of the school, such as urban (Lassen, Steele, & Sailor, 2006; Luiselli, Putman, & Sunderland, 2002) and suburban (Lewis & Sugai, 1999) areas.

Measures

The following variables were analyzed to determine the effects of school-wide positive behavior interventions and supports at the school-level and were obtained from the California Department of Education's (CDE) website. These variables were the California Standards Test (CST) mean scale scores for English-language arts and math, as well as suspension, expulsion, and truancy data. Each school site's annual Office Discipline Referral (ODRs) and PBS Framework data was obtained from the district.

Positive Behavior Support Framework

When implementing SWPBIS, it is important that the process be monitored using a fidelity tool (Sugai & Horner, 2004). To annually monitor overall implementation, Sugai, Lewis-Palmer, Todd & Horner (2005) have developed a tool called the School-wide Environment Test (SET) and Florida's Department of Education has developed the Benchmark of Quality (BoQ, Cohen, Kincaid, & Childs, 2007). Using an internal consistency reliability index, the SET demonstrated an overall α = .96 (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2004). Eight elementary schools administered the SET within a two to three weeks period to produce a 97.3% test-retest reliability, and 17 elementary schools had a primary and secondary observer and the inter-observer agreement was 99% (Horner et al., 2004).

The internal-consistency of BoQ has an overall reliability of $\alpha = 0.96$ (Cohen, Kincaid, & Childs, 2007). Twenty-eight schools administered the BoQ twice within two weeks to obtain a test-retest reliability and showed a high correlation of 0.94 ($p < 0.01$) (Cohen, Kincaid, & Childs, 2007). In 34 schools two raters completed the BoQ, the inter-rater reliability attained showed a high correlation, Pearson-Product Correlation 0.87 ($p < .01$) (Cohen, Kincaid, & Childs, 2007).

Based on the SET and BoQ, the district's PBS coaches developed the Positive Behavior Support (PBS) Framework (Johns & Patrick, MODEL Program, 2010). The PBS Framework was used to monitor SWPBIS implementation. The

PBS Framework scores has three levels: *'Commitment'* (stage 1), *'Implementation'* (stage 2) *and 'Durability'* (stage 3). There are 37 components under Commitment that a school needs to accomplish, 41 components for Implementation and 38 for Durability (for a total of 116 points). A school can work on more than one component at a time and the completion of the components does not need to be in a sequential order. The measure reviews the following areas: PBS Initiative, PBS Team, Data-Based Decision Making, Communication Systems, School-Wide PBS Trainings, Referral Procedures, Referral Information System, Universal Expecations and Rules, School-Wide Social Skills Instruction, School-Wide Acknowledgement System, School-Wide Interventions and Consequences, Managing Common Areas, Individual Behavior Support Planning, Behavior Emergency Procedures, and Comprehensive Network of Support. A copy of the PBS Framework is located in Appendix D.

A school site was considered to have fully implemented when it had completed all of the components in Commitment and Implementation sections of the PBS Framework. Key components that need to be implemented are: at least 80% of the staff are fully participating with the implementation process, students and staff demonstrate understanding of the rules, the expectations have been explicitly taught, and staff are reviewing data to monitor and make the needed changes to the intervention.

The PBS Framework was used to monitor the implementation process of the SWPBIS within the school sites. The information gathered by the PBS

coaches using the PBS Framework allowed the continuous variable data to be ranked by the different categories of implementation. In order to determine if any relationship exists between the intervention and student academic achievement Pearson Correlations were run in SPSS. The literature has demonstrated that as schools progress with the implementation of SWPBIS, as measured with the SET, there was a positive effect on discipline data (Lassen, Steele, & Sailor, 2006), which included a decrease in the number of office discipline referrals and suspensions. Also, in a study conducted with 23 schools, Walker, Cheney & Stage (2009) noticed as more components of SWPBIS were successfully implemented, the number of office discipline referrals went down.

Since SWPBIS is provided to all students within the school, school-level data was used to measure the effects on academics. From the California Department of Education's website, the California Standards Test (CST) *mean scale scores* were used to measure the growth within the subject content areas of English-language arts and math.

California Standards Test

To determine the academic growth within content areas of English-language arts (ELA) and math, the mean scale scores for each subject and grade-level from the CST was analyzed. According to CDE[b] (2010), the mean scale score can be used to compare scores within the same subject and grade-level. The mean scale score is an arithmetic mean or average of the scale scores, which range from 150 (low) to 600 (high) for all students who took

content-specific CSTs without modifications (California Department of Education[b], 2010).

It is important for the CST be both a reliable and valid measure. Reliability is the stability, consistency, and lack of variability of the scores produced by an instrument (Gerrig & Zimbardo, 2002). Using test-retest, the internal-consistency of the CST was determined (California Department of Education[a], 2011). For the CSTs English-language arts sections for 6th, 7th and 8th grade the test-retest reliability was (α = 0.93, α = 0.94, and α = 0.94) respectively and 6th and 7th grade math were (α = 0.94 and α = 0.93) respectively (California Department of Education[a], 2011). The 6th, 7th and 8th grade English-language arts CST subtests and the 6th and 7th grade math CST subtest are highly stable and reliable.

Validity is the extent to which a test measures what it was intended to measure (Gerrig & Zimbardo, 2002). The validity for the CST was analyzed for construct validity, item analysis, and concurrent validity by comparing the CST to another well known standardized test, the California Achievement Test (CAT/6; California Department of Education[a], 2011). There was a high correlation between the scores on the CST and CAT/6 for both English-language arts and math (California Department of Education[a], 2011). The *differential item functioning analysis* showed that > 90% of the items had the same score and valued interpretation for all individuals even if the students differ in demographics (California Department of Education[a], 2011). When comparing various content

sections, the ELA and math were moderately correlated (California Department of Education[a], 2011).

Procedures

This study reviewed the effects of school-wide positive behavior interventions and supports on student academic achievement and other student outcomes. It was imperative that the schools that participated in the study had implemented SWPBIS for at least five years or more. As stated earlier, in the Participants Section, in the 2003 - 2004 school year one school started to implement SWPBIS, five middle schools started working with the two PBS coaches to implement SWPBIS in 2005 and the last two schools implemented in 2006. Appendix E provides a full chronology of the implementation process the PBS coaches used with the schools and a brief overview follows. As the schools worked through the process, each school completed the components at various times. Some of the components took a long time to implement, while other components required numerous attempts.

To implement SWPBIS, the PBS Coaches first met with the site-level administrators to obtain their support for the intervention. In order to ensure SWPBIS will be implemented and become a sustainable program, it is important for site-level administrators to 'buy-in' to and support the intervention (Netzel & Eber, 2003). Once each site-level administrator signed the commitment form, the PBS coaches then asked the administrators to create leadership teams. The

PBS Coaches met with the leadership teams to secure their commitment and help the teams develop an action plan. The development and implementation of the action plans took six to twelve months for many schools, and some never were able to complete this. The action plans consisted of clearly defining the expectations, procedures for teaching the expectations, procedures for reinforcing appropriate behaviors and preventing problem behaviors, and a system for collecting data (Sugai & Horner, 2002). The PBS coaches met monthly with the leadership teams and quarterly with the administration from each school to monitor the development and implementation of the intervention.

Recruitment

Initial contact was made with the district's deputy superintendent to explain the purpose of the study. Appendix A contains a copy of the handout that was provided to the deputy superintendent to outline the study. At that time, explanations were provided as to the type of data sought, as well as permission obtained to conduct the study within the district. A sample copy of the permission letter used by the deputy superintendent to grant consent to participate in the study is provided (Appendix B). During this meeting, the researcher gained permission to be able to contact the district's two positive behavior support coaches.

Confidentiality

Assurances were given that confidentiality would be maintained and the district and schools would not be identified in the study by name. All public data

collected was held and recorded without identifying information. Each school site was given a project ID that appeared on all of the data collected, including information from the PBS coaches.

Data

Since the district had already implemented SWPBIS, archival data was available and collected for analysis. The following data was obtained from CDE's website for each middle school: demographic information, CST mean scale scores, suspension/expulsion data and truancy. Data for the following school years were gathered: 2003-04(baseline), 2004-05, 2005-06 (the year the program was mandated by the district to be implemented at all middle schools), 2006-07, 2007-08, 2008-09 and 2009-10.

The two positive behavior support coaches who are employed by the District worked directly with schools on implementing school-wide positive behavior interventions and supports. Based on the SWPBIS model established by Sugai and Horner (2002), the district's two PBS coaches developed the implementation process they used to support the school sites through the establishment of SWPBIS. The PBS coaches collected implementation data from each school through observation, interviews with administration and leadership teams, as well as reviewing office discipline referrals. This data was analyzed to determine the progress the schools were making with implementation of SWPBIS and any supports or trainings that may be needed to help the staff with implementation.

The PBS Framework data from 2004-2010 were made available for review to determine when the schools were considered to have started implementing as well as their status in regards to implementation. If any of the data collected by the PBS coaches was unclear or required clarification regarding unknown acronyms or vague language, the PBS coaches were contacted for clarification. Participation in the study was voluntary for the district and the two PBS coaches (see Appendix C for sample consent).

All the data collected was coded to maintain confidentiality and then organized in an Excel spreadsheet by school and year. Once this step was completed, it was uploaded in SPSS in order to conduct various statistical analyses.

Data Interpretation

The demographic and measurement data obtained from CDE's website was organized by school and year in an Excel spreadsheet and uploaded to SPSS. The implementation data collected by the PBS coaches was hand counted to determine how many components were implemented each school year. The office discipline referral data obtained from the PBS coaches were added to the Excel spreadsheet and uploaded to SPSS.

After all the data had been uploaded to SPSS, and the descriptive analysis performed, multiple baseline graphs were created for each dependent variable. A multiple baseline provides a visual, which helps with checking the

efficacy of results by establishing if the change in behavior was due to the intervention (Slavin, 2007). All eight schools did not implement during the same school year; one school implemented in 2004 and five others started the implementation process the next year, followed by the last two schools the following year, and provided implementation at various times. These various implementation times make a multiple baseline graph a good fit to review the effects of the implementation of SWPBIS on student outcome data. A multiple baseline helped to distinguish the point when the school started implementing SWPBIS, and to determine from that point forward if there were any changes in the CST mean scale score, as well as any decrease with the discipline data. A multiple baseline graphs allowed for an examination of SWPBIS data over time and determined if there were long-term effects. By being able to mark when the school site started implementing, an analysis of on-going results and effects can be visually seen. This process of data interpretation of the multiple baseline graphs is called *trend analysis*. Trend analysis allows the researcher to observe changes in the data over time.

Other analyses were conducted to determine the relationship between academic achievement scores and SWPBIS intervention. The data collected with the PBS Framework, the tool used to monitor the school site's implementation of SWPBIS, were counted and inputted in the Excel spreadsheet. A Pearson correlation was run in SPSS and analyzed for the association between how many components of SWPBIS had been implemented with the

achievement and behavioral variables. This test was chosen to help determine if any relationship existed between the number of components of SWPBIS implemented by a school and the benefits the school received from the intervention, such as increase in student achievement and decrease in office discipline referrals, suspension and expulsions.

Repeated measures analysis of variances (ANOVA) was conducted for each student outcome variable. The purpose was to determine if the difference in student outcome variables between the implementation of SWPBIS and spring 2010 was meaningful.

CHAPTER FOUR

RESULTS

Introduction

Data

The data for this study was collected from the California Department of Education website and from the school district. The following variables were used in this study: implementation, office discipline referrals (ODR), suspensions, expulsions, truancy, CST mean scale scores in ELA for grades six, seven, and eight, as well as CST mean scale scores in math for grade six and seven. The descriptive scores for these variables are located in Table 2. The raw data used for this study is listed by school in Appendix F.

When analyzing all eight schools together, all parametric assumptions were met. Using the criteria z (± 3.50) no univariate outliers were detected and no multivariate outliers were found using a mahalanobis statistical test with a z critical (18.31; df 10; $p<0.05$). Each school's data was reviewed individually as well. Similar to the findings above, each school meet all parametric assumptions and when using the same criteria no univariate or multivariate outliers were detected.

To determine the status of implementation for the eight middle schools in the study, the district's PBS coaches collected data using the PBS Framework, a tool they created based on nationally recognized tools, the School-Wide

Environment Tool (SET) and the Benchmark of Quality (BOQ). The SET and BOQ have high reliability. The SET has an overall reliability of $\alpha = 0.96$ (Horner, Todd, Lewis-Palmer, Irvin, Sugai, & Boland, 2004) with a 97.3% test-retest reliability and 99% inter-observer reliability (Horner et al., 2004). The BOQ also has a $\alpha = 0.96$ overall reliability, with a 0.94 ($p < 0.01$) test-retest reliability and 0.87 ($p < .01$) inter-rater reliability (Cohen, Kincaid, & Childs, 2007).

Table 2

Descriptive Data

Descriptive									
	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
						Stat	Std. Error	Stat	Std. Error
implementation	54	.00	90.00	42.6111	31.09718	.014	.325	-1.292	.639
ODR	39	879.00	4996.00	2.1529E3	982.20893	1.040	.378	.466	.741
suspensions	47	334.00	1634.00	7.2206E2	236.96233	1.490	.347	3.798	.681
Expulsions	43	1.00	18.00	5.9302	3.84457	1.390	.361	2.090	.709
Truancy	47	279.00	1629.00	6.6774E2	231.78461	1.451	.347	5.100	.681
CST Mean Scores ELA 6	50	294.70	333.00	3.0910E2	10.53211	.879	.337	-.144	.662
CST Mean Scores ELA 7	54	299.30	344.20	3.1770E2	9.93536	.162	.325	.089	.639
CST Mean Scores ELA 8	54	296.20	336.10	3.1456E2	9.08462	.002	.325	-.253	.639
CST Mean scores Math 6	50	290.30	340.90	3.0999E2	13.43259	.456	.337	-.699	.662
CST Mean scores Math 7	54	289.90	338.60	3.1600E2	11.31332	-.137	.325	-.545	.639

The implementation data was collected by school district staff between 2004 – 2010. The school district provided this archived information to be used for review as well as interpertation as to when the participating schools were considered to have implemented SWPBIS and the status of the implementation.

The PBS Framework is broken down by various components of SWPBIS. The researcher counted the number of components on the PBS Framework each school was considered to have implemented by end of the school year. This information was inputted into an Excel spread sheet from which the multiple baseline graphs were developed. The data was also uploaded to SPSS for statistical analysis.

The Pearson correlation was run using all the continous variables, including missing data. Prior to conducting the repeated measure ANOVAs, to eliminate missing data, the 2003-2004 office discipline referrals, suspensions, expulsions, and truancy data was dropped due to the fact that neither the district nor the state of California collected this information that school year. Since School B was not open during the 2004-2005 school year, an average linear mean was used to determine data in order to minimize the missing data for school year. When running repeated measure ANOVA for the ODR variable, School D was dropped due to too much missing data. The CST ELA and math variables were averaged across grade levels to minimize the effects caused by missing data from School B (which did not open until 2005-2006) and Schools C and G (which changed grade configurations in 2008).

Findings

Implementation Results

In review of the implementation data, School A started to implement SWPBIS in the 2003-2004 school year and Schools C, D, E, G and H started the process in the 2004-2005 school year. The final two schools, School B and F started in the 2005-2006 school year. By spring 2005, Schools A, E, G, and H were considered to be in the *Commitment* stage, according to the district's developed PBS Framework, with School C in the *Implementation* stage. By spring 2006, Schools A, C, G and H were in the *Implementation* stage and Schools B, D, E and F were at the *Commitment* stage.

By the end of the 2005-2006 school year, all eight schools had committed to the implementation of SWPBIS as defined by *Commitment* on the PBS Framework. Commitment is defined as having a leadership team established, the administrator's support secured, expectations defined, and a means for monitoring data established. In spring 2008, all eight schools were considered to be at the *Implementation* stage; however, School D started the implementation process again the following year, and by spring 2010, had not achieved *Durability*.

Durability is defined as having 67% or more of the components of SWPBIS have been established including reviewing the data to refine the action plan (to meet the needs of the students and staff). As of spring 2010, Schools A, E, F, and H were considered to be at the *Durability* stage on the PBS Framework

and to have all necessary components of SWPBIS implemented. Schools B, C, D and G were at the *Implementation* stage. It should be noted that School C has consistently been at the implementation stage since spring 2005.

To demonstrate the effects of SWPBIS on behavior and academics at each school site, multiple baseline graphs were used. All eight schools are represented by a line on the graph, with the corresponding shape representing the school listed on the *x* axis to identify the year when the school site started the SWPBIS process. The areas measured were office discipline referrals, suspensions, expulsions, truancy, California Standards Test (CST) for English-language arts (ELA) for grade sixth, seventh and eighth and CST math for grades sixth and seventh. The graphs represent data from the 2003-2004 school year through to the 2009-2010 school year.

Question One

In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, do truancies decrease, and does this continue over time once the program is fully implemented? To answer this question the California Department of Education's definition for truancy was used and data was collected from the website. The California Department of Education defines truancy as the number of students with unexcused absences or tardies on three or more days (California Department of Education[b], 2011). Figure 2 provides a graphic representation of the truancy patterns for each school. For most of the schools, once commitment

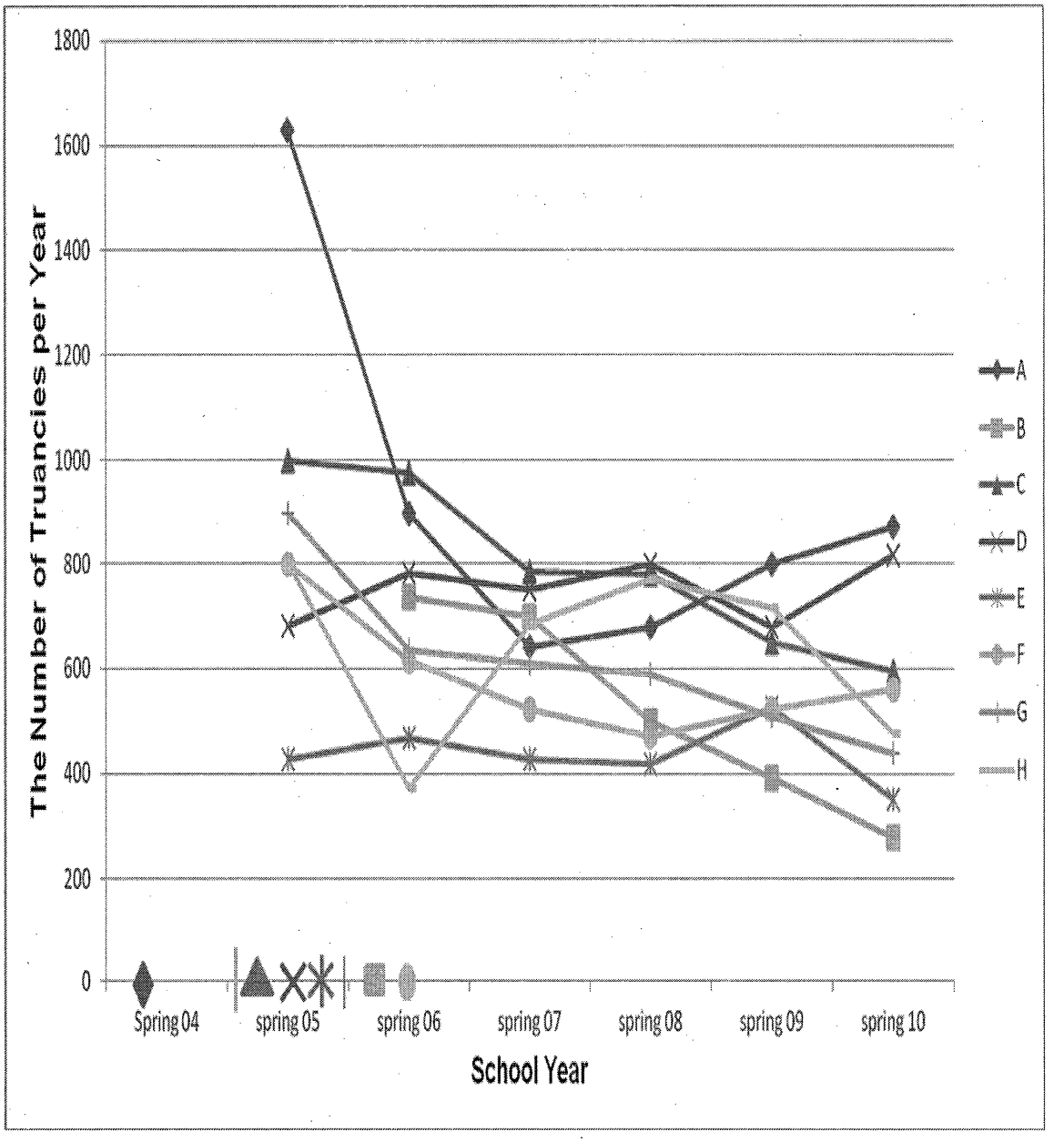

Figure 2. The Effects of Implementing School–Wide Positive Behavior Interventions and Supports on the Number of Truancies per Year by School. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

to the SWPBIS process was made, the representative line on the graph slightly moves downward to the right. However, overall the trend lines are fairly flat with Schools A, D and F making an increase during the 2009-2010 school year and Schools B, C, E, G and H going downwards. There is not a consistent pattern between schools that are considered to have implemented all the components of SWPBIS and the schools that have experienced a decrease in truancies over the years.

To obtain a statistical perspective of the effects the implementation of SWPBIS had on truancy, a repeated measure ANOVA was run to determine if there was meaning in the change that occurred in the number of students experiencing truancies at each school during the period SWPBIS was implemented (table 3). The change in truancy was significant, and the effect size was good. The implementation of SWPBIS can explain 38% of the variance in change among the groups. The plot graph (figure 3) shows a steep decrease between year one and year two with a steady decrease continuing through the years. In year six the decrease in truancies was larger, as demonstrated by the line becoming steeper than the previous few years, but not as large or steep as the first year.

Table 3

Repeated Measure Analysis of Variance for Truancies

		Sum of Squares	df	Mean Square	F	Sig.	Eta^2
Truancy	Years	523414.854	5	104682.971	4.284	.004	.380
	Error	855239.979	35	24435.428			

A Pairwise Comparison Post Hoc analysis was reviewed and there was a significant decrease in the truancy data from spring 2005 to spring 2009 and spring 2005 to spring 2010. Spring 2005 was the only year where the amount of change was significant when compared with the other years. The remainder of the years when compared to each other did not reach a significant change.

To determine if there was an association between the implementation of SWPBIS and changes with the truancy data, a Pearson correlation was run. In looking at the overall data, the implementation of SWPBIS and truancy did not reach significant levels in their association.

Summary and Fit With Hypotheses. It appears over time that the implementation of SWPBIS has impact on truancy. Even though an association between the implementation of SWPBIS and truancy was not found, when reviewing the multiple baseline graph (figure 2) and the plot graph (figure 3), visually one can see that truancy does decrease as more components of SWPBIS are implemented. This matches the study's hypothesis that truancies will go down once a school site implements SWPBIS and this decrease will

continue as more components of SWPBIS are fully implemented. As seen with the multiple baseline graph, the sites that were considered to have implemented all the components of SWPBIS had limited decreases in the number of truancies. This result may have been caused by the district and school sites being more conscientious with collecting and reviewing data as part of the implementation of SWPBIS.

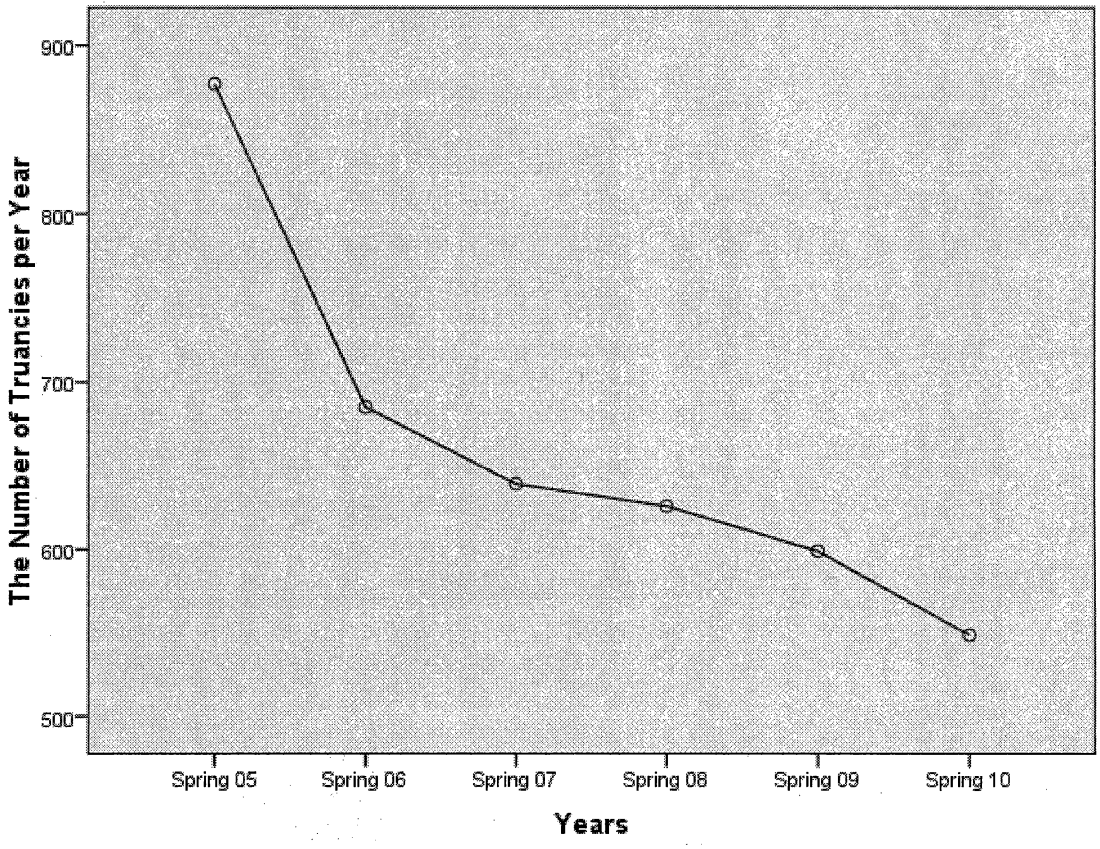

Figure 3. Estimated Marginal Means of Truancies per Year.

Question Two

In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, does the number of office discipline referrals (ODRs), suspensions, and expulsions decrease, and does this continue over time once the program is fully implemented? The multiple baseline graphs provided a visual depiction on how the implementation of SWPBIS affected ODRs (figure 4), suspensions (figure 5), and expulsions (figure 6) over seven years. In all three figures a steady decrease is present once the school started and continued to work on the implementation process. Even School D, where SWPBIS was implemented once and then started all over again, experienced limited, inconsistent decreases in the number of ODRs, suspensions and expulsions. The other seven schools that implemented with more consistency demonstrated more steady descending lines to the right illustrating that as the intervention was implemented fewer ODRs, suspensions and expulsions were experienced. In 2008 and 2009, most of the schools experienced a slight bump up in their suspension and expulsion data reported to CDE. According to the district, this was the year the system used to collect ODRs, suspensions and expulsions and therefore the data could not be cleanly separated. In some cases, ODRs were also counted as a suspension in the report to CDE, and this data needs to be reviewed cautiously.

Repeated measure ANOVAs were conducted to determine if the change as seen on the multiple baseline graphs was meaningful and statistically

significant. The change in the number of ODRs (table 4) once SWPBIS was implemented was statistically significant with a very large effect size and variance. The implementation of SWPBIS explained 82% of the variance among the groups.

The ODR plot graph of the estimated marginal means (figure 7) shows a steep decrease between year one and year three with a continuous decrease throughout the remainder of the study. Post hoc analysis was conducted through a pairwise comparison. In reviewing the pairwise comparisons, there were significant changes from year to year with the most significant changes being between the beginning years and the latter years when school sites had a majority of the components of SWPBIS implemented. However, the changes between spring 2005 to spring 2006, spring 2007 to spring 2008, and spring 2009 to spring 2010 were not significant. The remainder of the years when compared did have a significant change.

Table 4

Repeated Measure Analysis of Variance for Office Discipline Referrals

		Sum of Squares	df	Mean Square	F	Sig.	Eta^2
ODR	Years	2.82000000	5	5640944.038	26.457	.000	.815
	Errors	6396373.476	30	213212.449			

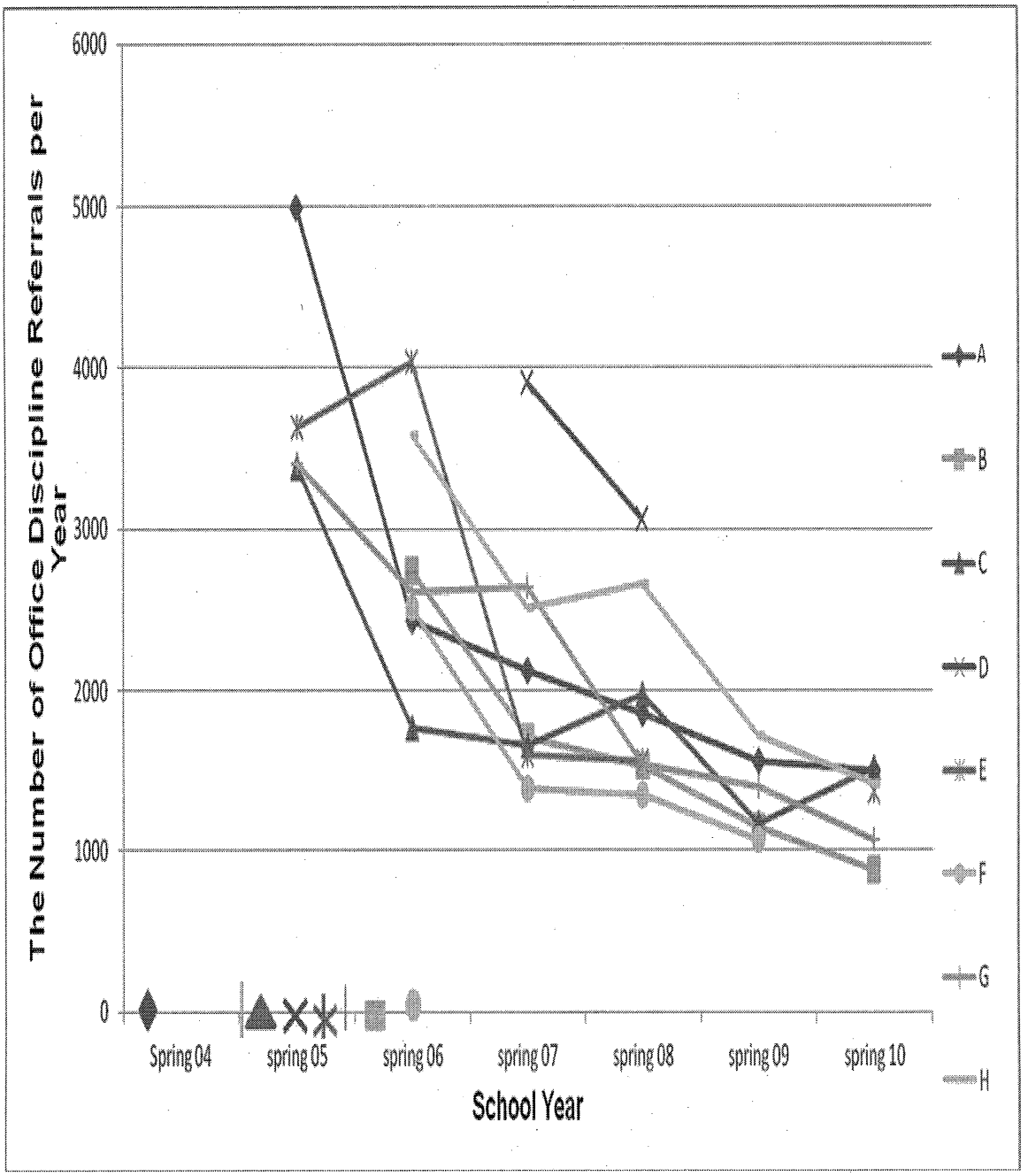

Figure 4. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on Office Discipline Referrals per Year by School. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

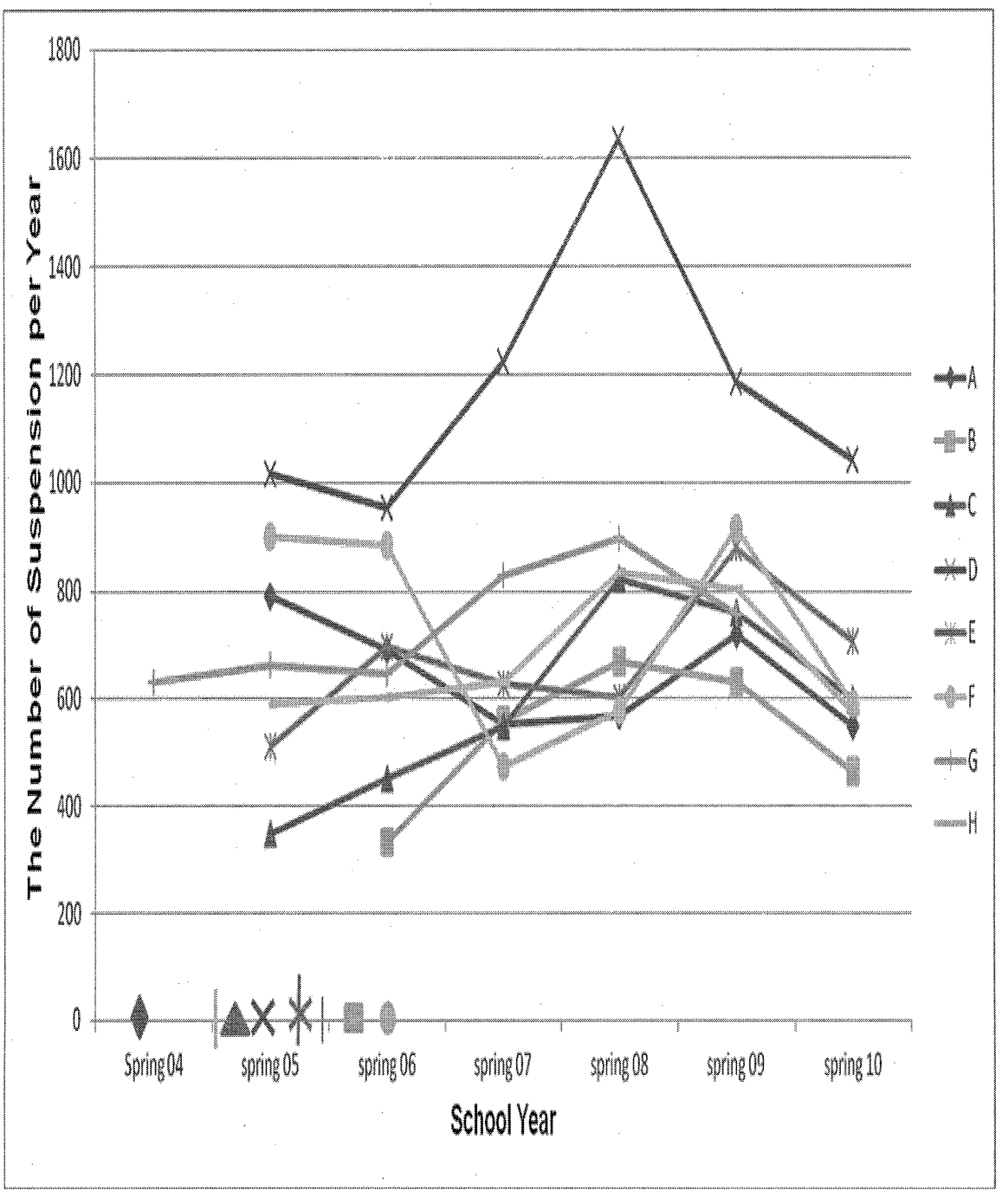

Figure 5. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on Suspension Data per Year by School. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

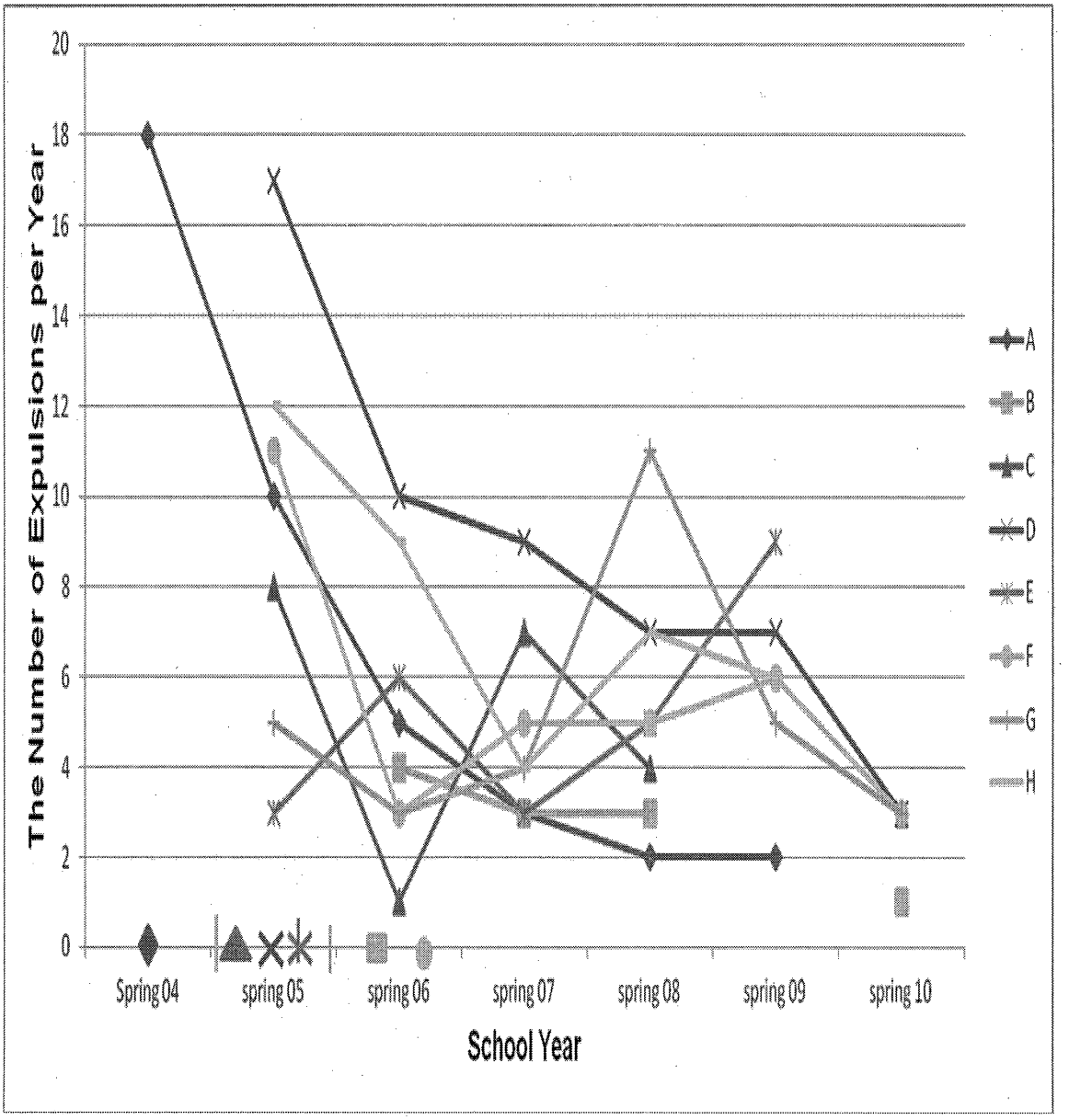

Figure 6. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on the Number of Expulsions per Year by School. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

With suspensions (table 5) the assumptions were not met and Greenhouse-Geisser analysis was used to correct. Even with using this statistical analysis significance was not met. However, the *F* was large indicating that there was a change, and the effect size indicated that the implementation of SWPBIS was effecting the variance among groups. In looking at the plot graph of the estimated marginal means for the suspensions (figure 8), there is a sharp increase between spring 2007 and spring 2009. As discussed earlier, this increase may have been caused from ODRs not being cleanly separated from the suspensions.

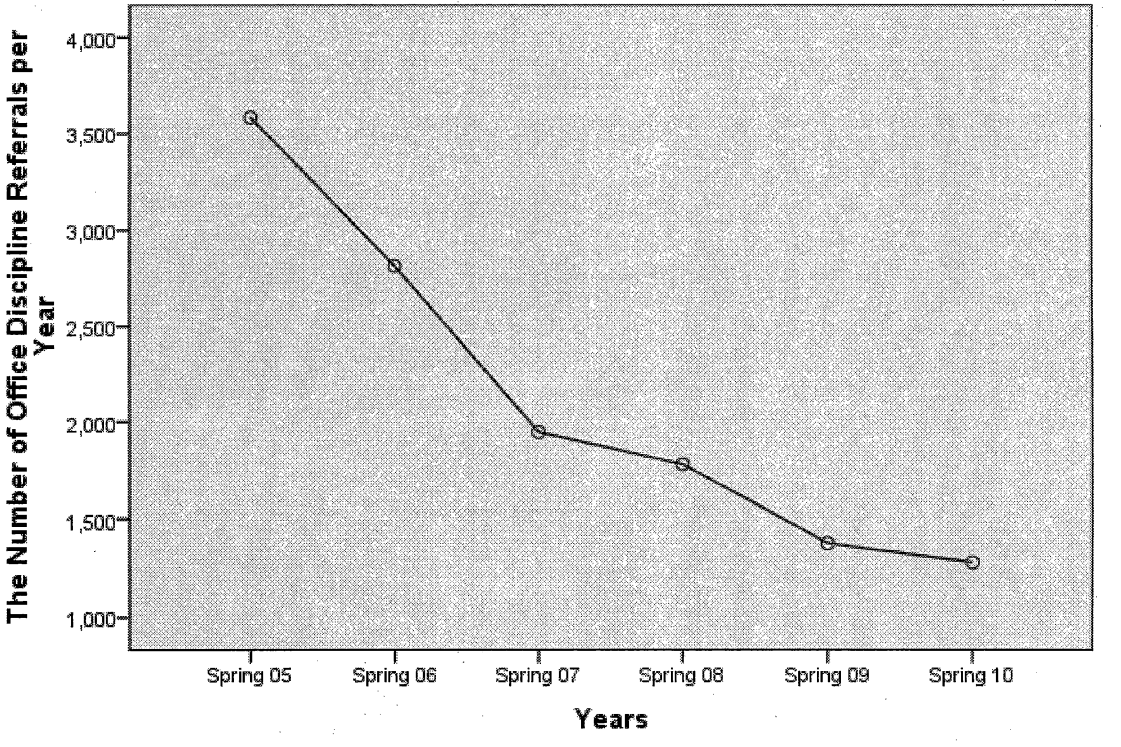

Figure 7. Estimated Marginal Means of Office Discipline Referrals per Year.

A pairwise comparison was run as a post hoc analysis. When this data were reviewed, spring 09 was the only year with significant change with other years. This may be due to steep peek during year five. In spring 10, the line comes back down to the levels of spring 05, spring 06 and spring 07.

Table 5

Repeated Measure Analysis of Variance for Suspensions

		Sum of Squares	df	Mean Square	F	Sig.	Eta^2
Suspensions	Years	349149.604	1.540	226722.445	3.578	.073	.338
	Error	683139.896	10.780	63371.585			

The change within the number of expulsions (table 6) was statistically significant. There was a good variance among groups and the implementation of SWPBIS explained 45% of the variance. The estimated marginal mean plot graph for expulsions (figure 9) provides a visual of how the expulsion data changed during the study. From spring 05 to spring 06 there was a steep decrease with the change leveling off between spring 06 through spring 08. After spring 08, the number of expulsions started to decrease again and continued through spring 10.

To determine when the significance changes occurred, a pairwise comparison was reviewed. The change between spring 05 and spring 06, Spring

07, spring 09 and spring 10 were significant and the change between spring 09 and spring 05, spring 06, spring 07 and spring 08 were significant.

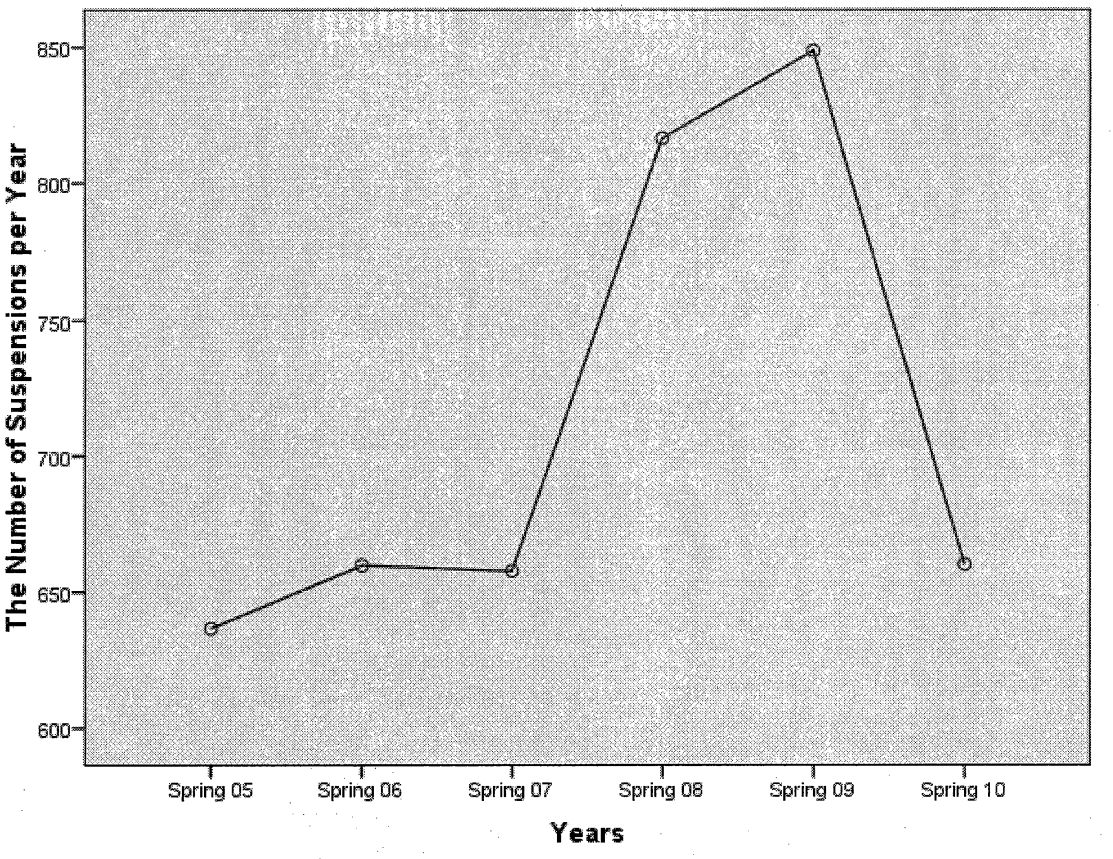

Figure 8. Estimated Marginal Means of Suspensions per Year.

The greatest changes were just after the first year and the last few years of the study.

Table 6

Repeated Measure Analysis of Variance for Expulsions

		Sum of Squares	df	Mean Square	F	Sig.	Eta^2
Expulsion	Years	270.667	5	54.133	5.800	.001	.453
	Error	326.667	35	9.333			

To review the association between the implementation of SWPBIS fidelity with the three behavior variables (ODR, suspension, and expulsion) a Pearson correlation test was performed in SPSS. When looking at all the schools together there was an association between SWPBIS being implemented and ODRs (r = -0.545, p < 0.01) with an effect size of (r^2= 0.297). When interpreting the variance in change among ODRs for all eight schools, 30% can be explained by SWPBIS being implemented. There was also an association between expulsion and the components of SWPBIS being implemented (r = -0.488, p < 0.01) with an effect size of (r^2 = 0.238), explaining 24% of the variance among the change with expulsions over the past seven years. The association with suspensions was not significant.

Summary and Fit With Hypotheses. As expected, when SWPBIS was implemented, there was a decrease in the number of ODRs, suspensions and expulsions for each school as demonstrated by the trend lines on the multiple baseline graphs and the direction of the plot graphs. In looking at both graphs, the changes were strong right after the schools started to implement the

components of SWPBIS and then the schools started to see another strong decrease once a majority of the components of SWPBIS were implemented.

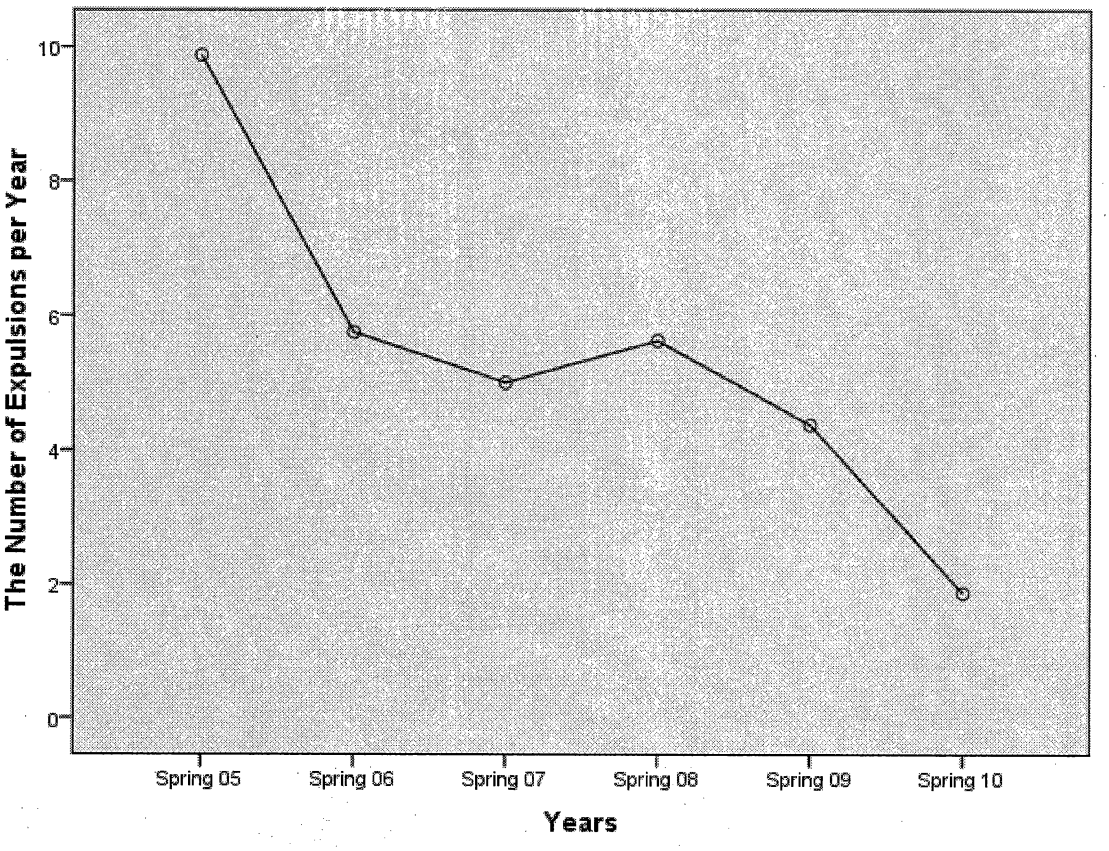

Figure 9. Estimated Marginal Means of Expulsions per Year.

However, a steady decrease continued throughout the years of the study. These changes in the ODR and expulsion data are significant and the effect sizes are large. Also, the change in office discipline referrals and expulsions was associated with the implementation of SWPBIS. However, the results of the statistical analysis run with the suspension data did not demonstrate statistical

significance; these findings may have been affected by the data collected during 2008 including office discipline referrals.

Question Three

In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, does the mean scale scores of the English-language arts (ELA) section on California Standard Test (CST) increase, and does this continue over time once the program is fully implemented? The California Standards Test (CST) – English-language arts (ELA) mean scale scores are presented by grade-level in multiple baseline graphs; sixth grade is found in Figure 10a, seventh grade in Figure 10b, and eighth grade in Figure 10c. On all three graphs, the lines for the schools are ascending to the right. However, the lines are not perfectly straight and there is some up and down movement in this ascent. On a closer look, the downward movement for schools after the date of implementation of SWPBIS is smaller than prior to the implementation. For Schools A, B, C, E, F, G, and H, after spring 2007 when they were all in the *Implementation* stage on the PBS Framework, the lines on all three graphs ascend at a steeper rate. Even School D experienced increased CST scores as they struggle with implementation.

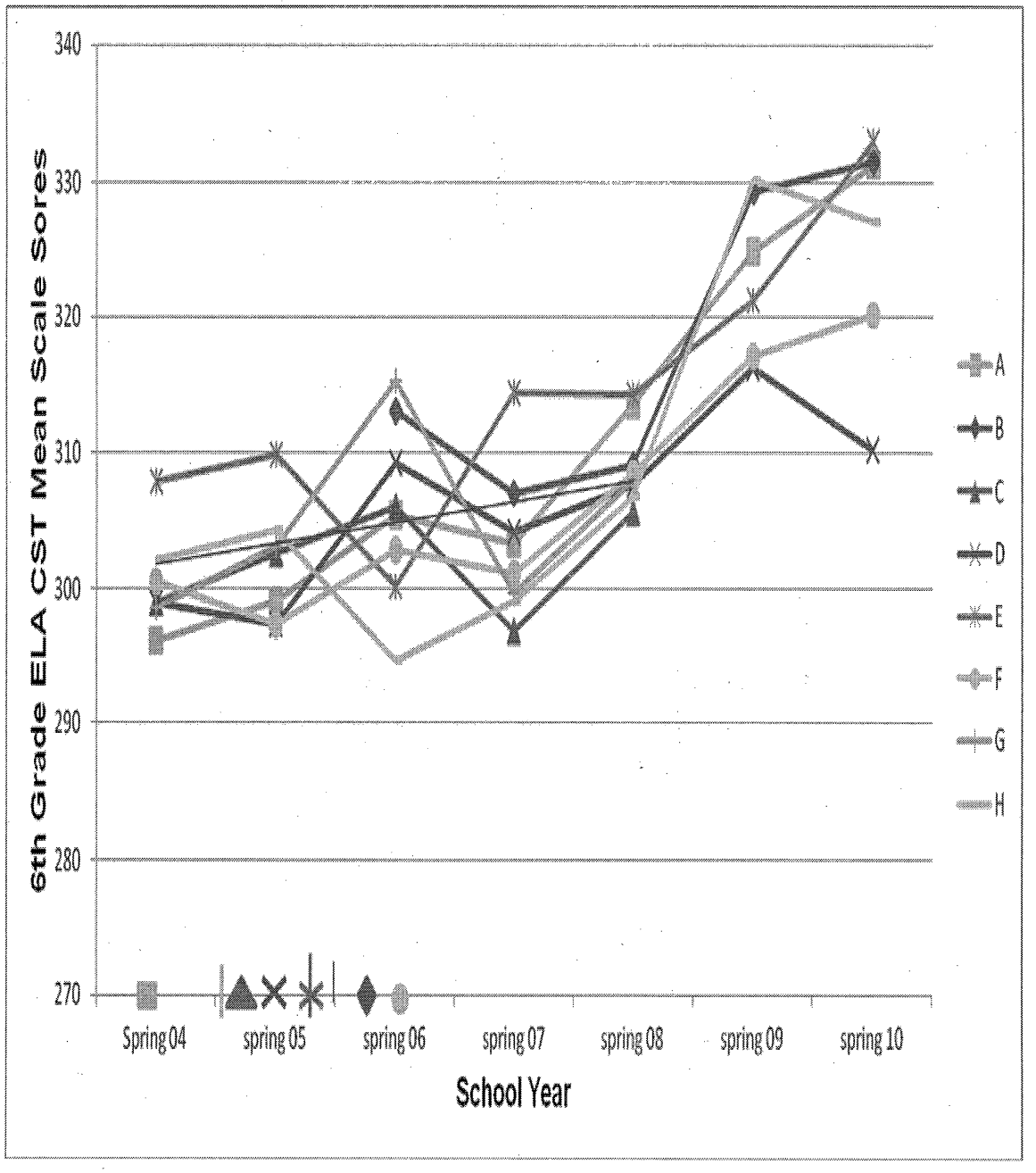

Figure 10a. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on the Mean Scale Scores of the 6th Grade English-Language Arts California Standards Test. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

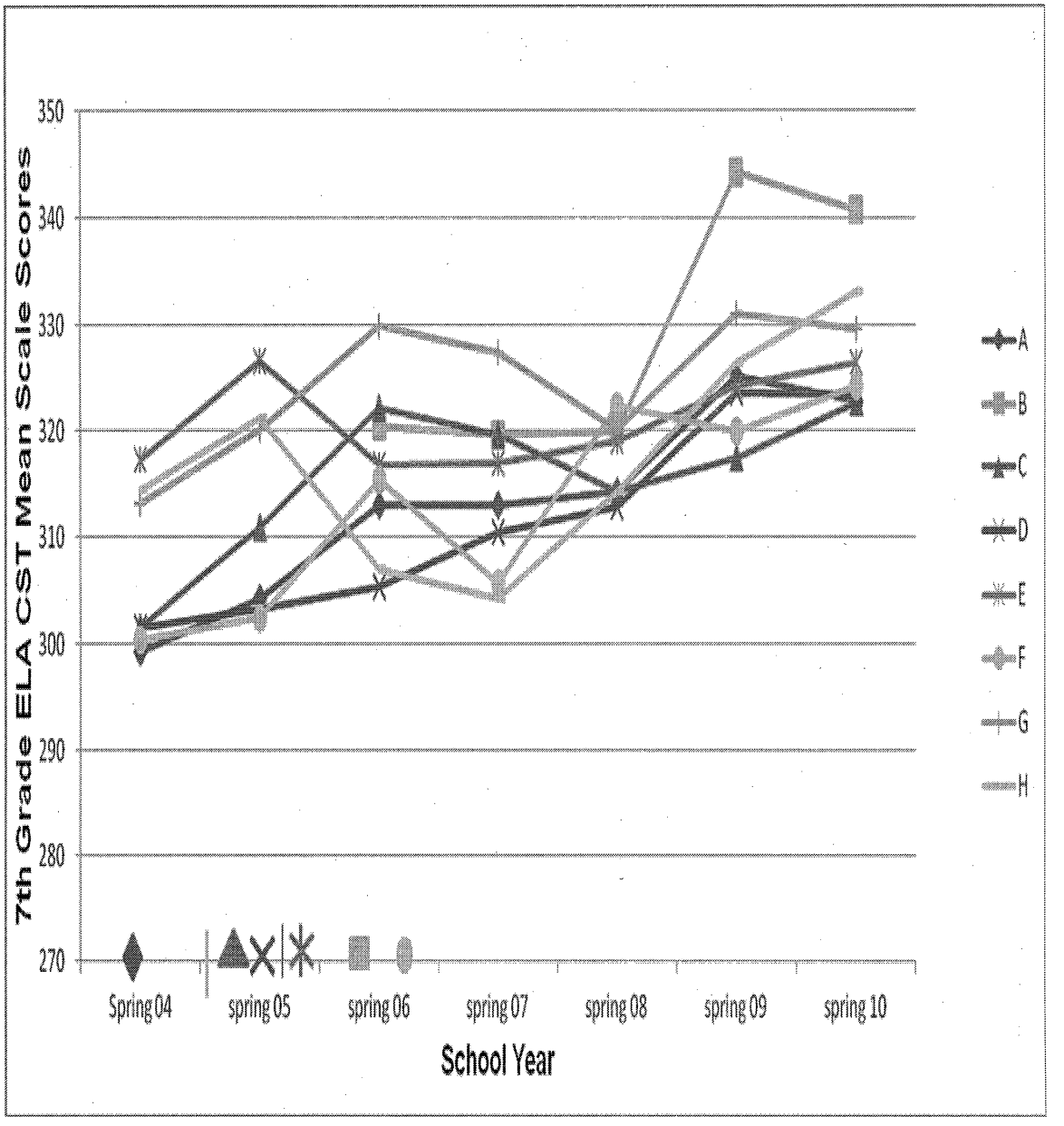

Figure 10b. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on the Mean Scale Scores of the 7th Grade English-Language Arts California Standards Test. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

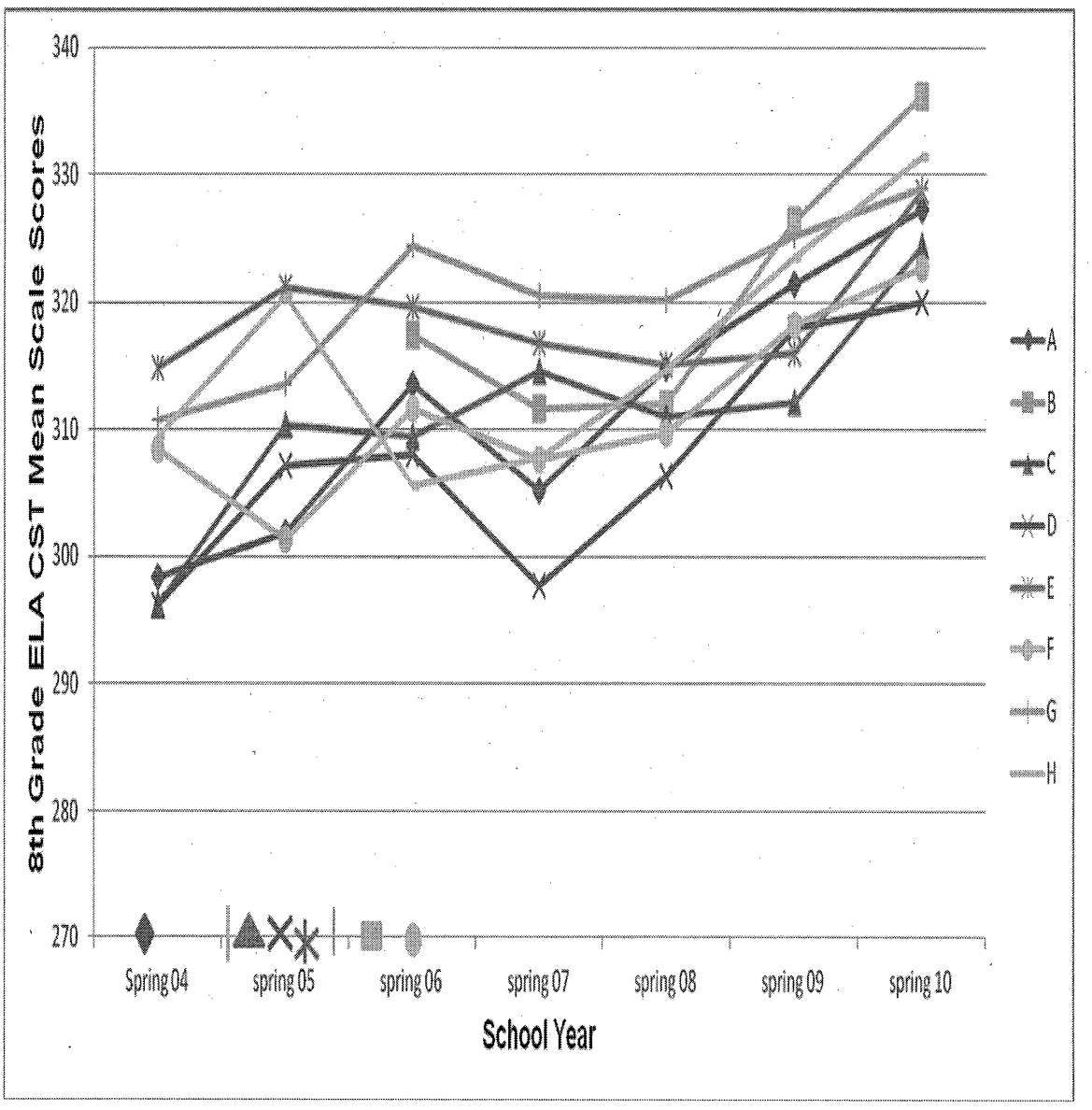

Figure 10c. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on the Mean Scale Scores of the 8th Grade English-Language Arts California Standards Test. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

Repeated measure ANOVA was run to determine if the change from 2004 to 2010 in CST-ELA scores was meaningful (table 7). To compensate for missing data due to School B not being open prior to the 2005-2006 school year and Schools C and G changing grade configuration in 2008, the CST scores were averaged across grade levels for each year. The change in CST–ELA scores was statistically significant with an extremely large effect size and 75% of the variance among groups being explained by the implementation of SWPBIS. When looking at the plot graph for the estimated marginal means for the CST-ELA (figure 11), the line shows a strong increase in CST mean scale scores for English-language arts. Between spring 06 and spring 07 there was a slight decrease, but the following year the increase started again.

Table 7

Repeated Measure Analysis of Variance for the California Standards Test for English-Language Arts

		Sum of Squares	df	Mean Square	F	Sig.	Eta^2
CST ELA	Years	2323.449	6	387.242	17.564	.000	.745
	Error	793.693	36	22.047			

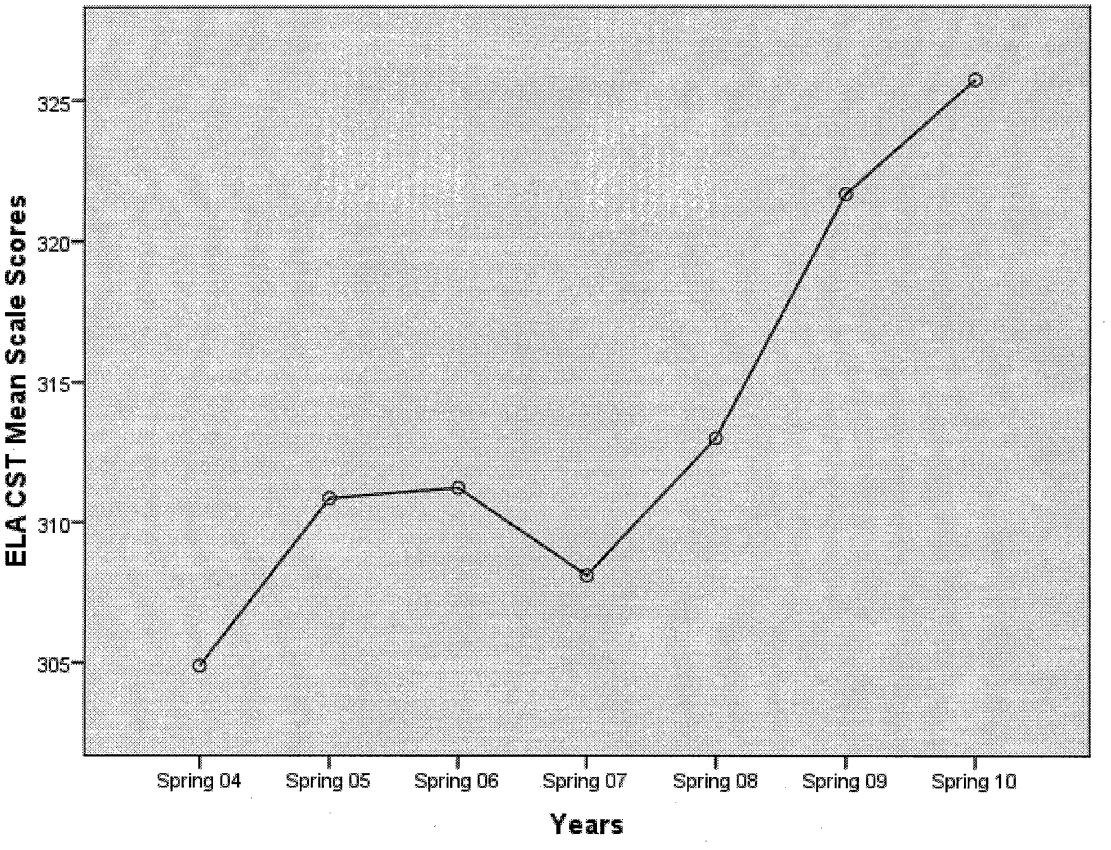

Figure 11. Estimated Marginal Means of the California Standards Test English Language Arts per Year.

To explore further the significance of the increase with the CST-ELA scores, a post hoc analysis was conducted using pairwise comparison. When comparing spring 09 with every year in the study there was a significant change detected. Spring 10 had the same result. Spring 04 is compared to spring 08 and there is a significant change and spring 07 compared to spring 08. In spring 09 and spring 10, four of the schools (Schools A, E, F, and H) were working on sustaining the program and Schools B, C, D and G had almost completed all the

components needed to be considered fully implemented. This could be the reason why spring 09 and spring 10 had the most significant change in CST-ELA data.

To determine if these changes in CST-ELA scores were associated with SWPBIS being implemented, a Pearson correlation was conducted. SWPBIS implementation was strongly related to the rise in CST mean scale scores for ELA in all three grade levels. The change in CST-ELA mean scale scores at sixth grade was related to SWPBIS being implemented ($r = 0.584$, $p \leq 0.01$). The effect size was ($r^2 = 0.341$), with the implementation of SWPBIS explaining 34% of the variance among the CST-ELA scores for sixth grade. For seventh grade the relationship between CST-ELA and SWPBIS being implemented was ($r = 0.448$, $p \leq 0.01$), with an effect size of ($r^2 = 0.201$), where the implementation of SWPBIS explaining 20% of the variance among the CST-ELA scores. The eighth grade CST-ELA scores related with the implementation of SWPBIS ($r = 0.442$, $p \leq 0.01$), with an effect size of ($r^2 = 0.195$), and the implementation of SWPBIS explaining 20% of the variance among the CST-ELA scores.

Question Four

In middle schools in Southern California, as more components of school-wide positive behavior interventions and supports (SWPBIS) are implemented, does the mean scale scores of the math section on California Standard Test (CST) increase, and does this continue over time once the program is fully implemented? The multiple baseline graphs developed to illustrate the CST

math mean scale scores results are similar to the results seen on CST-ELA multiple baseline graphs. Figure 12a represents the results of sixth grade at each school and Figure 12b the seventh grade. Again the symbols at the bottom of the graphs represent when the school site was considered to have implemented SWPBIS. At both grade-levels the lines are ascending upward to the right representing growth on the CST math portion.

After spring 2008, when all schools were considered to have implemented most of the key components of SWPBIS as measured by the PBS Framework, on both 6th and 7th grade CST math multiple baseline graphs there were sudden increases in mean scale scores. In spring 2010, most schools' 6th grade CST mean scale scores for math had either no growth or a slight decrease, except for School A and School E where there was an increase. Overall, once a school started to implement SWPBIS, within a year CST math mean scale scores started to increase as well. As the school site moved closer to implementation with fidelity and were considered a strong implementer, the growth increased faster.

With all of this positive growth demonstrated on multiple baseline graphs for the CST math mean scale scores, the change over time was statistically significant, when using the Greenhouse-Geisser analysis for correcting (table 8). The effect size was large explaining 50% of the variance among the scores. The plot graph (figure 13) shows a slight increase from spring 2004 to spring 2005 and spring 2005 to spring 2006. A decrease started in spring 2007.

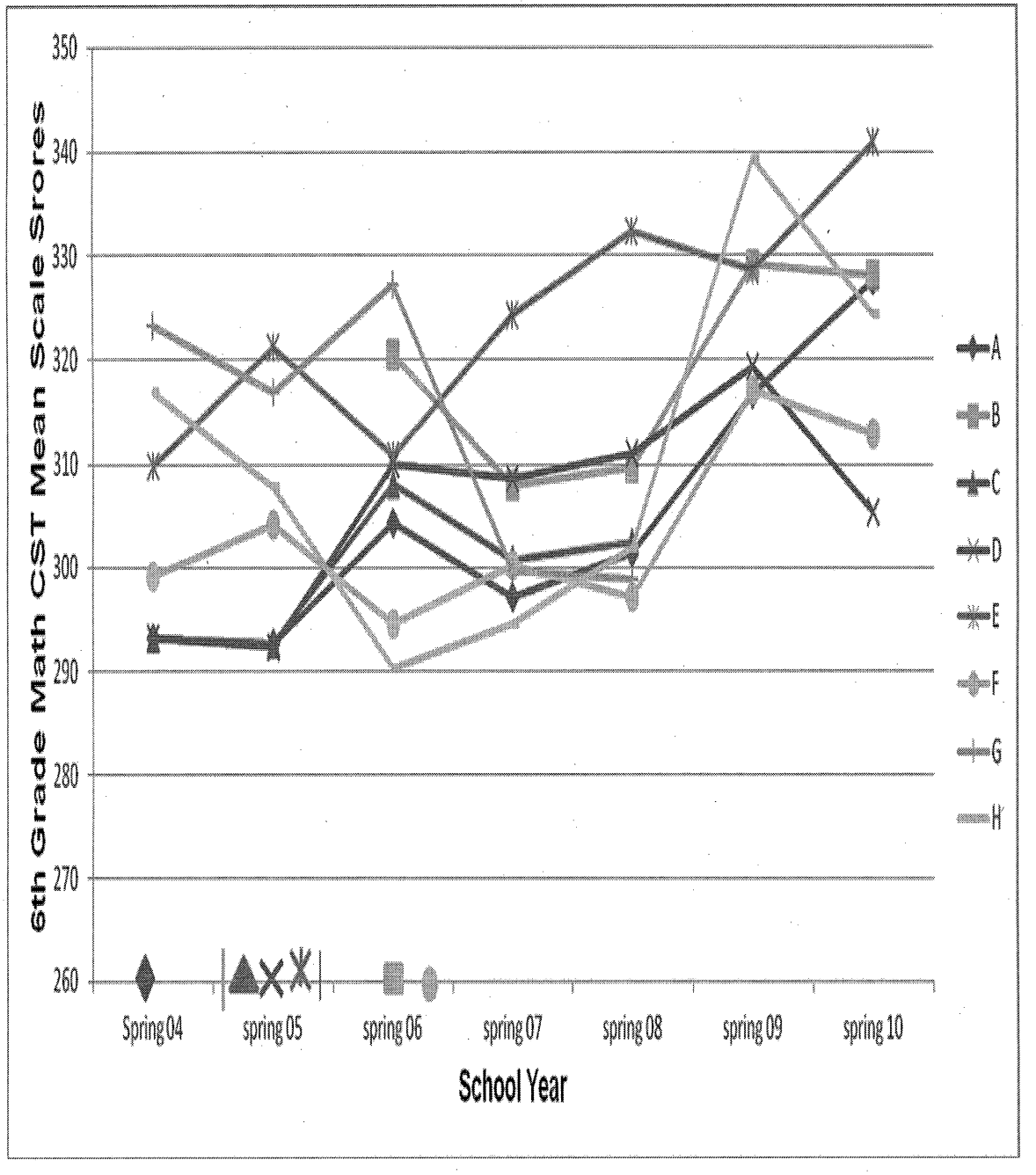

Figure 12a. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on the Mean Scale Scores of the 6th Grade Math California Standards Test. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

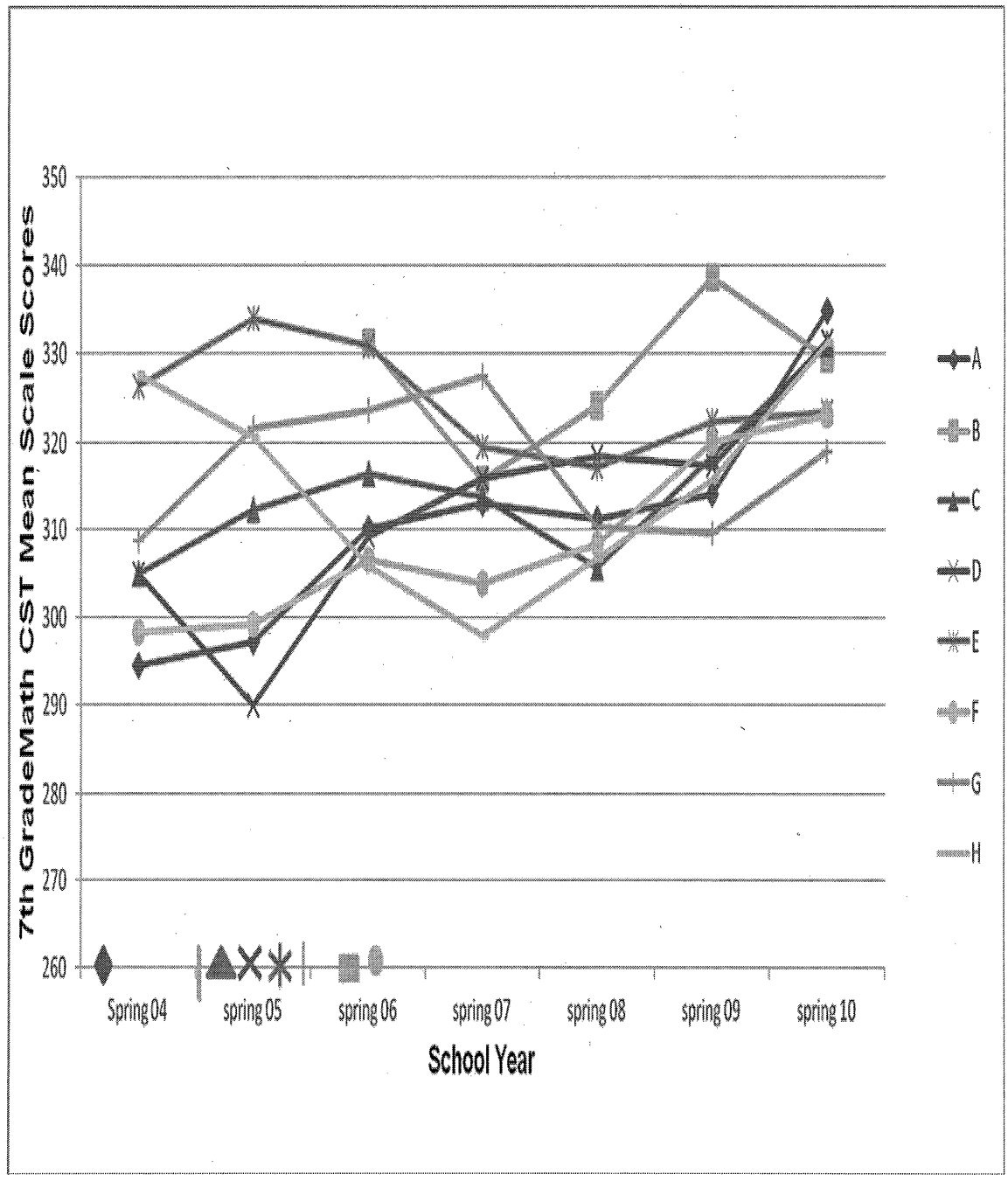

Figure 12b. The Effects of Implementing School-Wide Positive Behavior Interventions and Supports on the Mean Scale Scores of the 7th Grade Math California Standards Test. The shapes on the horizontal axis depicts the year the school implemented SWPBIS.

Table 8

Repeated Measure Analysis of Variance for California Standards Test for Math

		Sum of Squares	df	Mean Square	F	Sig.	Eta^2
CST Math	Years	2123.966	2.765	768.009	5.895	.007	.496
	Error	2161.831	16.591	130.299			

After spring 2008, there was an extremely large increase with over ten points between spring 2008 and spring 2009 and over fifteen points between spring 2008 and spring 2010. Spring 2010 demonstrates a significant change when compared with all of the other years. Spring 2009 had significant change with spring 2004, spring 2007, spring 2008, and spring 2010. A post hoc analysis was conducted using a pairwise comparison to determine which year had the most significant change and impact. The change between spring 2010 and all the other years was significant, as well as the changes between spring 2009 and spring 2004, spring 2007, and spring 2008.

There was a relationship between sixth grade CST math mean scale scores and the implementation of SWPBIS ($r = 0.310$, $p \leq 0.05$), with an effect size of ($r^2 = 0.096$). By implementing the components of SWPBIS, 10% of the variance with the CST math mean scale scores was explained. The growth at seventh grade on the CST math mean scale scores was similarly associated with the implementation of SWPBIS ($r = 0.295$, $p \leq 0.05$), with an effect size of ($r^2 =$

0.087). The implementation of SWPBIS with fidelity explained 9% of the variance in the seventh grade CST math mean scale scores.

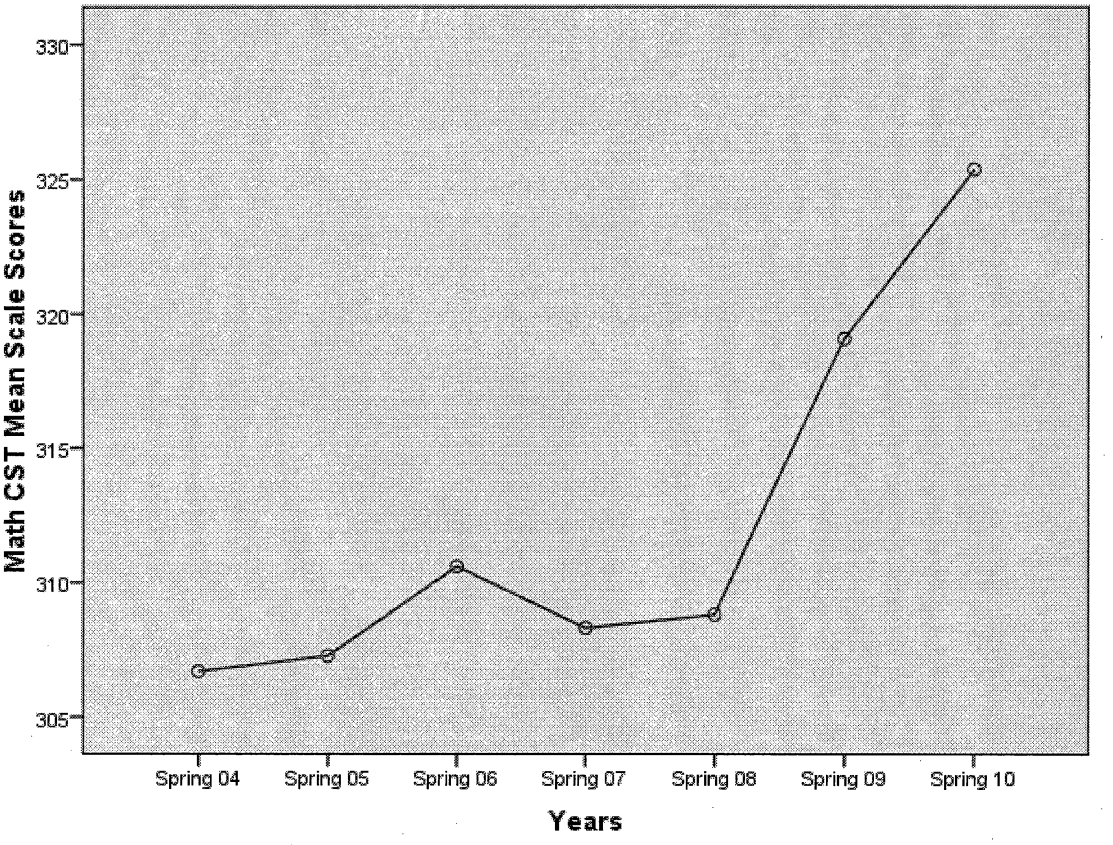

Figure 13. Estimated Marginal Means of the California Standards Test Math per Year.

Question Five

Is there a difference in academic achievement between schools that have fully implemented all the components of school-wide positive behavior interventions and supports (SWPBIS) compared to schools that have not? The

previous two questions focused on the achievement scores of the participating eight middle schools in English-language arts and math. As part of the discussion above, Schools A, E, F, and H were considered to have fully implemented all the key components of SWPBIS by spring 2009. There was also discussion on how the implementation of SWPBIS effected the change with academic achievement.

Summary and Fit With Hypotheses. The multiple baseline graphs demonstrated ascending lines to the right for all three grade levels; sixth, seventh and eighth, representing growth on the CST-ELA and math subtest over the past seven years. Statistical testing was conducted to determine if these changes in scores were meaningful, as well as associated with SWPBIS being implemented. The repeated measure ANOVAs showed that the changes in the CST mean scale scores for ELA and math were meaningful, as well as associated with the implementation of SWPBIS. The relationship between the implementation of SWPBIS and the increases in CST ELA and math mean scale scores were strongly related. This positive growth and relationship between the successful implementation of SWPBIS and academic achievement in both English-language arts and math is what the literature predicted would happen. In review of the pairwise comparison conducted as a post hoc analysis, as the school spent more time implementing components of SWPBIS, the changes were more significant. For example, spring 2009 and 2010 when compared to earlier years when the

intervention was just being started, demonstrated a more significant change in the scores.

Summary

The findings from this study support questions posed by past researchers. Some researchers in the field of SWPBIS questioned if there was a relationship between implementation of SWPBIS and academic achievement (Lassen, Steele, & Sailor, 2006; Sugai & Horner, 2006; Warren, et al., 2006). Others were interested in determining if a school site could sustain the implementation of SWPBIS over time, and if so, would students continue to make academic achievement gains (Sugai & Horner, 2008)? On a cursory level, both of these questions were addressed.

School A started the implementation process during the 2003-2004 school year and continued to use the SWPBIS process through the seven years of the study. Also during this time, School A made steady growth with academic achievement in both ELA and math. Schools E and F started the process later in the 2004-2005 and 2005 – 2006 school year respectively. Both of these schools received the benefit of School A working through the implementation process and the district learning how to best coach and support a school. Schools E and F worked through the implementation process quicker than School A and were considered to have reached the *Implementation* stage on the PBS Framework by spring 2008. That same school year they saw positive gains on the ELA and math portions of the CST.

The study also showed that the academic gains made by the students on the CST-ELA were significant. Also, this academic growth was associated with the implementation of SWPBIS. For the 6th graders, 34% of the variance in the growth on the mean scale scored on the CST-ELA was explained by the implementation of SWPBIS. For the seventh grade and eighth grades, 20% of the variance was explained respectively. The implementation of SWPBIS explained 10% of the variance in the growth on the sixth grade CST-math and 9% for seventh grade CST-math.

In conclusion, the results demonstrated how the fidelity of implementation of SWPBIS affected various student outcomes. When school sites start to implement SWPBIS, a decrease in office discipline referrals, suspensions and expulsions are noticed, along with increases in student academic achievement. As school sites fully implement all components of SWPBIS, the change over time with academic achievement in English-language arts and math were statistically significant. Also the implementation of SWPBIS was strongly related to the change in mean scale scores on the CST.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

Overview of Study

The purpose of this study was to look at the effects that school-wide positive behavior interventions and supports, when implemented with fidelity have on student outcomes, especially academic achievement. Eight middle schools from an urban Southern California school district participated in this study. In the 2005-2006 school year these eight middle schools were mandated to implement SWPBIS. Using Sugai and Horner's model (2002, 2004 & 2006) the eight school sites worked with the district's positive behavior support coaches to implement school-wide positive behavior interventions and supports. The model focuses on prevention of maladaptive behaviors through the development of a systematic plan for implementing and providing evidence-based practices (Sugai & Horner, 2006).

The systematic plan includes the establishment of a leadership team, site-level administrator's buy-in and support, development of three to five behavior expectations, and includes schedules for teaching the expectations. Also part of the plan is a system to reward appropriate use of the expectation and redirecting inappropriate behaviors. The plan needs to include a means for monitoring the implementation process, as well as the use of data to revise the action plan. The preparation and implementation of SWPBIS may take up to three years and to

have all core components in place and focus on sustainability may take up to seven years (Bradshaw et al., 2004).

Seven years ago, School A implemented SWPBIS during the 2003-2004 school year. Schools C, D, E, G and H implemented in 2004-2005 school year, and five years ago, Schools B and F implemented in the 2005-2006 school year. All the schools that participated in this study began the implementation process at least five years ago; therefore, longitudinal data was available to establish the study's hypothesis that when SWPBIS is implemented the number of office discipline referrals will decrease (Luiselli et al., 2005; Taylor-Green et al., 1997), the number of suspensions will decrease (Bradshaw et al., 2010) and academic achievement will increase (Bradshaw et al., 2010; Horner et al., 2009; McIntosh et al., 2010; Scott & Barrett, 2004). Archival data from the California Department of Education and the school district were used to answer the study's questions on how the implementation of SWPBIS affected the following student outcomes: truancy, office discipline referrals, suspensions, expulsions and academic achievement in English-language arts and mathematics.

What was noticed was as the schools began to implement SWPBIS, the number of ODRs, suspensions, expulsions and truancies started to decrease and mean scale scores on the CST English-language arts and math started to increase. Also, the findings showed that as the sites fully implemented all the components of SWPBIS and were working towards sustaining the program they continued to experience positive changes in student outcomes over the seven

years of the study. According to the statistical analysis reviewed, these changes over time were statistically significant.

Discussion

Findings

The school sites in this study worked with the district's PBS coaches to implement school-wide positive behavior interventions and supports. Even though the specific program implemented at each school site was individualized to meet the school's unique culture and needs, the staff still followed the same implementation steps as defined in Appendix E. The administrator at each participating school had to commit to the program and establish a leadership team whose responsibility was to develop the action plan and oversee the implementation of SWPBIS. Each of the schools in this study used the same expectation, *Be Responsible, Be Respectful and Be* Safe, and the PBS coaches provided examples on how to define and teach the expectations; however, if needed, the staff had flexibility to develop their own expectations. The PBS coaches spent a lot of time working with the leadership team demonstrating how to use and review data to make changes to the implementation action plan accordingly. The nine implementation steps defined in Appendix E were developed to be implemented over a two year period of time, which includes time for planning the implementation process.

The planning time is critical for successful implementation of SWPBIS. This stage involves obtaining staff buy-in with the concept as well as agreement to implement. It also is the time when the leadership team works with the staff to define the three expectations by location, and gain commitment to teach the expectations to all students. Before the implementation of the system, the leadership team needs to develop the lessons to be taught to the students as well as a schedule for when all teachers will teach the behavior expectation lessons. The leadership team is charged with creating a system for rewarding appropriate student behaviors and responding and redirecting inappropriate behavior. For successful implementation of SWPBIS, all staff need to react the same when responding to student behaviors.

When the staff at a school site started to implement SWPBIS using the process defined in Appendix E, the effects of the intervention were noticed within months. The school experienced these changes even when a few components of the SWPBIS system were implemented. The trend lines on the multiple baseline graphs (figures 2, 4, 5, 6, 10, 12) demonstrated that when a school implemented school-wide positive behavior interventions and supports, the number of office discipline referrals, suspensions and expulsions decreased and academic achievement increased. The multiple baseline graphs showed that the student outcomes were positively affected by the implementation of SWPBIS. This trend was replicated with all eight schools. The schools did not need to be fully implemented to start receiving benefits from the implementation of SWPBIS.

However, as more components of SWPBIS were implemented, the intervention had greater affect on student outcomes as seen in Figures 2, 4, 5, 6, 10, and 12.

Truancy. Truancy, as defined by the number of students having three or more unexcused absences, was found to exhibit limited changes from the implementation of SWPBIS. The literature surrounding SWPBIS is silent regarding the effects on truancy. The researcher hypothesized that there will be a connection between the implementation of SWPBIS with fidelity and truancy based on past research which has shown connections with improving school climate and SWPBIS (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008) and students feeling more connected to school (Baker, 1999). One of the components of SWPBIS is teachers caring about students. The outcome of this behavior is for staff and students to develop a positive relationship within an environment in which students feel more connected to school (Rodriguez, 2008). Unfortunately, in this study the connections created between the students and staff did not demonstrate a significant association when using statistical analysis, but there was a decrease with truancy when reviewing the plot graph (figure 3) and looking at the change in data over the span of the study. This validates the research conducted in Massachusetts by Luiselli et al. (2002), which stated when students feel connected to and a part of the school they will want to come and participate in school.

Behavior Variables. According to past research when a school implements SWPBIS with fidelity there should be a marked decrease in the number of office discipline referrals (Lassen, et al., 2006; Luiselli, Putman, & Sunderland, 2002; Taylor-Greene, Brown, & Nelson, 1997) as well as a decrease in suspensions (Bradshaw, Mitchell, & Leaf, 2010). Horner, et al. (2009) stated that when problem behaviors decrease, students will remain in school and become more engaged in learning, resulting in a learning environment that improves academic achievement. In this study, the general direction of multiple baseline graphs for ODR (figure 4), suspensions (figure 5) and expulsions (figure 6) support Horner et al.'s (2009) hypothesis that when the components of SWPBIS are implemented ODRs suspensions and expulsions will decrease.

Academics. According to the literature, as problem behaviors decrease within a school, the students will become more engaged in the instruction, leading to improved academic achievement (Bradshaw, Mitchell, & Leaf, 2010; Horner, et al., 2009; Mcintosh, Filter, Bennett, Ryan, & Sugai, 2010; Metzler, Biglan, Rusby, & Sprague, 2001; Scott & Barrett, 2004; Sugai & Horner, 2006). As stated above, the figures that represent behavior data (figures 4-6) are descending to the right once the school was considered to have implemented SWPBIS. The descending lines represent a decrease in the number problem behaviors. In the figures that represent academic data (figures 10, 12), the lines are ascending to the right, representing an increase in academic scores on the CST English-language arts and math portion. Therefore, the trend lines followed

the expected direction. The results supported prior researchers' theories that when SWPBIS is implemented, academic achievement will rise.

School sites with staff who worked with the PBS coaches to implement all the components of SWPBIS with fidelity over time were able to sustain the intervention. Schools A, E, F and H were considered to have implemented all the components of SWPBIS with fidelity and were working on maintaining the intervention. These four schools showed positive increases in mean scale scores on the California Standards Test in English-language arts and math as SWPBIS is implemented.

As mentioned earlier, all the schools did not initiate the implementation process during the same school year. School A was first and Schools B and F last. Even though each school began at a different time, the same result occurred once the school site started to implement the components of SWPBIS. Each school experienced an increase with CST mean scale scores over the course of this study. These changes were associated with the implementation of SWPBIS. All eight schools had an increase in academics and a decrease in behaviors once SWPBIS was implemented. The key similarity was as more components of SWPBIS were implemented; the more steady the increase in academic achievement experienced by the school.

Implications

School sites where the staff worked together with administration and coaches to implement SWPBIS with fidelity, experienced positive outcomes. The

SWPBIS implementation process included the following components: defining and teaching behavior expectations, establishing a system to reward students who demonstrate appropriate behaviors and redirecting students acting inappropriately, as well as developing a system for monitoring the implementation of SWPBIS. When all of these components were put into place, the schools experienced improved behavior outcomes as measured by the decrease in the number of office discipline referrals, suspensions and expulsions, and an increase in academic achievement, as shown by growth with CST mean scale scores for both ELA and math.

An increase in academic achievement was achieved, as the number of ODRs, suspensions, expulsions and truancies were lowered, allowing students at these middle schools to remain in class and have more time to engage with instruction (Bradshaw et al., 2010; Horner et al., 2009; McIntosh et al., 2010; Scott & Barrett, 2004). One of the ways ODRs were lowered was by teaching students the expected behaviors for the classroom and school, as well as teaching appropriate social skills, such as how to interact with their peers and staff. By teaching students these expected behaviors and reinforcing the use of them, an environment was created that was conducive for learning (Nelson et al., 2002).

As more components of SWPBIS were implemented at the middle schools, the data showed positive gains. All the schools experienced benefits from implementing SWPBIS, but schools that implemented all of the components

of SWPBIS with fidelity experienced even larger decreases in ODRs, suspensions and expulsions and greater increases in academic achievement. In addition, at these middle schools where SWPBIS was implemented, changes in academic achievement were statistically significant.

In the past, few studies explored the relationship between the implementation of SWPBIS and academic achievement. This current study contributes to the field by providing further information on the relationship between the implementation of SWPBIS and student outcomes by illustrating the effects overtime and linking the changes to the implementation. This builds on the established knowledge base and supports past researchers' speculation that if students were provided an educational environment that was conducive to learning, then the students' academic achievement would increase (Nelson et al., 2002). In Nelson's (2002) study, seven elementary schools were reviewed after implementing SWPBIS and a statistically significant increase in student achievement in the area of language arts was found but not in math. In this current study, eight middle schools were reviewed after implementing SWPBIS and there was an increase in English-language arts and math scores which were proven to be statistically significant with large effect sizes.

Lassen, Steele, & Sailor (2006) studied an urban middle school to explore the relationship between school-wide positive behavior interventions and supports with the decreased number of office discipline referrals and suspensions. The study investigated the effects the decrease in ODRs had on

student academic achievement and determined that as ODRs went down, achievement went up. However, their research results did not link the increase in academic achievement to the implementation of SWPBIS but suggested this be researched. This current study reviewed the association between the implementation of SWPBIS and academic achievement, and established that when a school site implemented all components of SWPBIS and was working on sustaining the system, there was a relationship between the implementation and the increase in student academic achievement for both English-language arts and math. This provides evidence of a relationship between the implementation of SWPBIS and increases in student academic achievement.

Applied Implications

In this research, schools that implemented SWPBIS experienced the expected decrease in discipline problems as measured by the number of ODRs, suspensions, and expulsions. These schools also gained an increase in academic achievement, as measured by CST mean scale scores for English-language arts and math. These results provide a rationale for school administrators to consider the implementation of SWPBIS as a means to create an environment that is more conducive to learning. As mentioned earlier, upon the initial implementation of SWPBIS, the school's culture starts to transform. Within the first year of implementation, schools experienced decreases in the number of discipline problems and increases in academic achievement. These

positive changes continue overtime, as long as the school staff continue to work on sustaining the system.

In this time of academic accountability, it is important for school administrators to use all possible, ethical means to increase student achievement. The more time students are engaged with learning, the better their chances are with mastering the information. With SWPBIS staff are empowered as they teach and reinforce the behavior expectations, and redirect inappropriate behaviors. Once students understand the expected behaviors and staff are proficient in teaching and monitoring the expected behaviors, more time can be focused on teaching academics. This study illustrated how eight school sites where SWPBIS was implemented, experienced gains with academic achievement which were statistically significant and had large effect size.

General Limitations of Study

As with any study, there are limitations that need to be addressed. When interpreting the results from this study, the increases or decreases in student achievement scores could also have been the result of the implementation of specific academic interventions (Algozzine & Algozzine, 2007). Other factors that may have influenced these changes in scores are possibly in the reformatting or realignment of the test to the state standards (Bradshaw, Mitchell, & Leaf, 2010), as well as variation in instructional strategies being used from school to school, or the level of student motivation and test taking skills (Lassen, Steele, & Sailor, 2006). Also, since archival data was gathered from the

California Department of Education's website, it was difficult for the researcher to go back and determine what other influences might have existed. Some possible influences include a change in boundaries, leadership, or configuration of the grades at the school, which possibly may cause similar changes as observed occurring with the student outcome data. Another difficulty in determining effects of SWPBIS system from one school to another is that the implementation of SWPBIS lacks specific consistency. Each site implements a system which 'fits' the school's culture and needs. All of these factors, not within the researcher's control, need to be considered when interpreting the results.

Generalizability

This study only included participants in middle schools from the same urban Southern California school district that received the same level of support from the district with implementation. These findings demonstrated effects at the middle school level and may not be generalized to preschool, elementary and/or high school settings, or to charter schools or private schools. The findings also are based on the support provided by the district and the effects of the district's governance structure which may not generalize to other school districts that function differently, affecting the implementation results.

Another factor that needs to be considered when generalizing the finding of this study is the fact that the SWPBIS system is developed to meet the specific needs and culture of a school and may look different at each school site. Even

though the same process is used for implementation, the specifics may vary. However, considering the limitations, the findings from this study of a relationship between the fidelity of SWPBIS implementation and student academic achievement is promising.

Future Direction

Even though this study answered questions regarding the effects of the fidelity of SWPBIS implementation on academic achievement, there remain many unanswered questions, as well as the development of new ones. One question is related to other external influences affecting change to academic achievement. A recommendation for a future study might be to conduct a similar study with the researcher being present at the beginning of implementation and using a consistent tool to gather the data. This would allow the researcher more control over the data collection as well as the ability to document external influences and when occurred, e.g. new administration, new district policy, changes in school configuration, etc.

Further information is additionally needed on how a SWPBIS system affects students. A cohort study focusing on students progressing through a school may provide this understanding. Also, it is important to determine how the fidelity of implementation of SWPBIS affects the academic achievement of different student populations, such as English language learners, individuals with disabilities, and various ethnicities. With time being a limited resource at school

sites, Sugai and Horner (2006) have determined which components of SWPBIS are key to the implementation process; however it would also be important to focus on any components which are tied closely to academic achievement. Possibly a structural equation model could help determine if any one component, such as administrator's support, leadership team, defining expectations, reward system, data system, has more influence on increasing student academic achievement. Lastly, since SWPBIS has been being used throughout the nation, there are more longitudinal data available to explore if teachers and administrators are spending less time on discipline and more time with academics.

Recommendations

Recommendation One

School administrators who are concerned with meeting accountability mandates which require all students to be proficient with academic achievement should consider implementing school-wide positive behavior interventions and supports. This study showed that when SWPBIS is implemented with fidelity there is a relationship to the positive changes on the California Standards Test within the same year. Over time, the mean scale scores for sixth, seventh and eighth graders continued to increase in both English-language arts and math once SWPBIS was implemented and even after a school site shifted to sustaining the program.

Recommendation Two

When implementing SWPBIS, the focus should be on implementing the system with fidelity. In order to achieve the best effects on student academic achievement, all the components of SWPBIS need to be implemented with fidelity. Implementing all components with fidelity can take up to four to seven years using the process developed by Sugai and Horner (2002, 2004, & 2006). It is important for the school administrator to buy-in to the SWPBIS system (Handler et al., 2007), establish a leadership team, and provide the necessary support for implementation (Sugai & Horner, 2002). The site administrator and leadership team need to develop an action plan for implementation that ensures 80% of staff buy-in, assurance that students understand the expected behaviors, as well as the inclusion of a system for acknowledging appropriate behaviors and a system for redirection of inappropriate behaviors, for which all staff agree to use.

Recommendation Three

To ensure fidelity of implementation, school staff should work closely with an external coach when developing a SWPBIS implementation action plan (Horner et al., 2009). The district in the current study employed two PBS coaches to assist the schools with implementation. Their expertise and focus with assisting the school staff to implement with fidelity (Muscott et al., 2004) may possibly be a major contributing factor to the school's successful implementation and positive results received.

Summary

School districts that are concerned with increasing academic achievement should address more than just curriculum and instruction. Districts need to ensure that the school environment is conducive to learning. School-wide positive behavior interventions and supports is a process that school administrators and leadership teams can implement to change the school culture and environment in order to create a positive learning environment. As mentioned above, it does take five to seven years to implement all the components of SWPBIS with fidelity; however the time and work pays off by having a strong effect on student academic achievement. Even though it takes years for a school site to fully implement all the components of SWPBIS, changes in student outcomes are noticed within months once the first few components are implemented.

APPENDIX A

REQUEST OF DISTRICT CONSENT

REQUEST OF DISTRICT CONSENT

The District is being asked to participate in a study designed to investigate the effects of school-wide positive behavior interventions and supports (SWPBIS) on academic achievement. The study is being conducted by Gail Angus under the supervision of Dr. Brett Nelson, Professor of School Psychology, California State University, San Bernardino and Dr. Deborah Stine, Professor of Education Administration, California State University, San Bernardino. This study will be approved by the Institutional Review Board, California State University, San Bernardino during fall 2010.

PURPOSE:

The purpose of this study is to determine the effects of school-wide positive behavior support (SWPBIS) on student academic performance evaluated by using state assessments and other student outcomes. The expectation is when student behaviors are under control teachers will be able to spend more time on instruction, thereby positively impacting student academic ability. With accountability and high stake testing looming over school districts, it is important to implement research-based interventions which positively impact student test scores. This study will provide school districts with the necessary information to help determine if SWPBIS should be implemented as a district-wide intervention. The study will focus on middle school students from a Southern California school district which implemented SWPBIS at all the middle schools. Additionally, the study will evaluate data from California's state tests, suspension and expulsion

data, and school attendance information in order to analyze the impact of SWPBIS.

DESCRIPTION:

The study will investigate schools where SWPBIS has been implemented with fidelity and determine if students score higher on the English-language arts (ELA) and math subtests of the California Standards Test (CST), and if there is an increase in school attendance as well as a decrease in student discipline problems.

To implement this study, data from a public website, California Department of Education website, will be used. The data will be pulled is the District's middle schools' California Standards Test (CST) mean scale scores for English-language arts and math, demographic information, suspension/expulsion data and truancy. The public, historical data pulled will encompass the following school years: 2003-04 (baseline), 2004-05(the year the program was implemented in six schools), 2005-06 (the year the program was mandated by the district to be implemented at all middle schools), 2006-07, 2007-08, 2008-09 and 2009-10. The date of full implementation of the intervention will be determined by using historical information collected by the district's two positive behavior support coaches. Once the data is collected, various statistical tests will be run to determine if there are differences in student achievement, attendance and discipline after SWPBIS was implemented.

If any questions arise with interpreting the SWPBIS implementation data, the district's two positive behavior support coaches will be contacted to obtain clarification.

PARTICIPATION:

Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled and the subject may discontinue participation at any time without penalty or loss of benefits, to which the subject is otherwise entitled. Participation in this study means public, historical data from selected middle schools will be obtained from California Department of Education website. The following data will be used: student attendance, California Standards Test (CST), suspension/expulsion data and truancy. There may also be voluntary conversations with the positive behavior support coaches, either in person and/or email, to clarify the implementation data.

No individual recruitment of participants will be conducted for this study.

CONFIDENTIALITY OR ANONYMITY:

All data collected and clarifying information obtained from the positive behavior support coaches will be held in the strictest confidence. After the data collection is completed, names of the schools, personnel and school district will be removed from the documents and replaced with pseudo names. The names will be destroyed at that time. The raw data will be stored in a locked file cabinet in my home office.

DURATION:

The data collection from the public website should be completed by December 31, 2010 and the analysis of the data completed spring 2011. Any conversations with the positive behavior support coaches will be held during the 2010-2011 school year.

RISKS:

No foreseeable risk.

BENEFITS:

Through the dissemination of the research results there may be potentially important benefits to those who work with K-12 school sites. First, schools and districts will obtain an understanding of the effects of SWPBIS on academic achievement. Second, when SWPBIS is implemented, society will benefit by having students who are prepared to be socially competent adults and active citizens.

CONTACTS:

Gail Angus, Investigator: (951)334-2633 or angusg@csusb.edu
Dr. Brett Nelson, Co-Committee Chair (909) 537-5675 or bnelson@csusb.edu
Dr. Deborah Stine, Co-Committee Chair (909)537-7311 or debstine@csusb.edu

RESULTS:

Results of the study will be in the John M. Pfau Library at California State University, San Bernardino.

APPENDIX B

DISTRICT CONSENT

District Consent

Date:

To the Institutional Review Board of California State University, San Bernardino:

Gail Angus, doctoral student at California State University, San Bernardino, who is working with Dr. Brett Nelson and Dr. Deborah Stine, Co-Chairs on her Doctoral Committee, has permission to use public data regarding the academic performance, demographics and suspension/expulsion rates for middle schools in The District. Along with the public data, Gail has permission to contact the positive behavior support (PBS) coaches to request their voluntary participation in the study. I understand, as part of participation, the middle schools' public data from the California Department of Education Website will be obtained for analysis. The information collected from CDE's website and conversations with the PBS Coaches will be used for her research study titled "The Effects of School-wide Positive Behavior Interventions and Supports on Student Achievement and Other Outcomes". I understand the purpose of the study is to determine if there is any impact to student achievement when all components of positive behavior supports are implemented school-wide with fidelity. In addition, I understand there will be no direct contact with teaching staff or students, and all information shared with the researcher will be randomly coded to protect the students', teachers', administrations', schools' and school

district's identity. Due to the nature of the study, there are no foreseeable risks or harms to students, staff or the school district.

I am entering into this agreement voluntarily, and understand I can withdraw participation and data at anytime without penalty. If questions or concerns should arise, I have been provided contact information for the researcher and her co-committee chairs.

If you have any question, please do not hesitate to call me at (__)___-___.

Sincerely,

Name

title

APPENDIX C

INFORMED CONSENT

Informed Consent

The study you are being asked to participate in is designed to investigate the effects of MODEL Program (a school-wide positive behavior interventions and supports) on academic achievement and other student outcomes. The study is being conducted by Gail Angus, doctoral student at California State University, San Bernardino under the supervision of Dr. Brett Nelson, Professor of School Psychology, California State University, San Bernardino and Dr. Deborah Stine, Professor of Education Administration, California State University, San Bernardino. This study has been approved by the Institutional Review Board of the California State University, San Bernardino, and this consent form should bear the official stamp of approval. The University requires that you give your consent before you can participate in this study.

During this study, the researcher will be reviewing your school's data posted on California Department of Education's website. This data will include CST Means Scale scores for school years 2003-04, 2004-05, 2005-06, 2006-07, 2007-08, 2008-09, and 2009-10 and correlating demographics, suspension/expulsion data and truancy data. The District will provide the researcher historical program implementation data. If at any time unknown acronyms or vague language is uncovered, the researcher will contact the PBS Coach for clarification.

All information shared with the researcher will be randomly coded to protect the identity of students, teachers, administrations, school and school

district. Due to the nature of the study, there are no foreseeable risk or harm to students, staff or the school district. If you have any questions or concerns about this study, please feel free to contact Dr. Brett Nelson at bnelson@csusb.edu or (909) 537-5675 or Dr. Deborah Stine at debstine@csusb.edu or (909) 537-7311.

By signing below, I acknowledge that I have been informed of, and understand, the nature and purpose of this project, and entering into this agreement voluntarily, and understand I can withdraw participation and data at anytime without penalty. I acknowledge that I am at least 18 years of age.

Date: _____

_____, _____, _____

Signature Title Phone #

APPENDIX D

POSITIVE BEHAVIOR SUPPORT (PBS) FRAMEWORK

Positive Behavior Support (PBS) Framework

EVIDENCE:	COMMITMENT Stage 1	IMPLEMENTATION Stage 2	DURABILITY Stage 3
Positive Behavior Support (PBS) Initiative	☐ PBS Team acquires implementation materials from District PBS Coaches. ☐ PBS initiative is introduced to all staff. ☐ PBS professional readings are presented staff based on implementation focus.	☐ >80% of staff commits to implementing PBS. PBS implementation progress is shared with staff monthly. ☐ Procedures are established to train new staff on the PBS initiative.	PBS Team commits to reviewing the *PBS Framework* twice/year. ☐ School develops goals and monitors progress based upon the *PBS Framework.* ☐ PBS initiative is able to withstand staff turnover.
PBS Team	☐ Administration selects a PBS Team to represent the school community (tracks/grades/classified, etc.). ☐ PBS Team commits to meeting regularly. ☐ PBS Team updates staff on implementation progress.	☐ Administration actively supports implementation (time, funds, resources). ☐ PBS Team establishes norms, assigns roles, and keeps minutes. ☐ PBS Team recruits and trains new members, as necessary.	☐ PBS Team uses a problem-solving, progress-monitoring approach. ☐ PBS Team is able to withstand member turnover. ☐ Sub-committees are established to implement PBS components.
Data-Based Decision Making	☐ Audit and/or survey data is used to inform PBS implementation. ☐ Staff analyzes referral and suspension data monthly.	☐ PBS Team utilizes audits and/or surveys to identify systemic challenges. ☐ Staff develops interventions in response to data.	☐ On-going audits and/or surveys are conducted. ☐ Discipline data drives problem-solving at the administrative, staff, and team level.
Communication Systems	☐ School commits to building open/honest, communication systems. ☐ PBS Team evaluates current communication systems for effectiveness (inclusive, open/honest, two-way).	☐ A communication system is in place to link PBS Team5staff/Guest Teachers. ☐ A communication system is in place to link school5 students/parents/community. ☐ A communication system is in place to link school5coaches/district.	☐ All communication links are routinely evaluated for effectiveness (inclusive, open/honest, and two-way). ☐ PBS-related forms of communication are routinely reviewed and updated (newsletters, brochures, bulletin boards, marquee, Guest Teacher packets, handbooks, etc.).
School-Wide PBS Trainings	☐ Administration dedicates staff development time for PBS trainings. ☐ PBS Team identifies student and parent training needs. ☐ Administration dedicates time for student and parent PBS trainings.	☐ An annual PBS training schedule is established for staff. ☐ An annual PBS training schedule is established for students and parents (two times per year – minimum). ☐ A variety of positive discipline trainings are routinely provided by District Coaches, PBS Team, and/or other personnel.	☐ Analysis of staff development results in additional trainings. ☐ New staff/students are routinely trained in PBS components. ☐ Administration and PBS Team provide differentiated staff development based on identified concerns.

Johns, S., & Patrick, J. (2010). Retrieved March 14, 2010, from MODEL Program: http://modelprogram.com/homepage.html

EVIDENCE:	COMMITMENT Stage 1	IMPLEMENTATION Stage 2	DURABILITY Stage 3
Referral Procedures	☐ Staff is trained to distinguish *Minor Offenses* from *Major Infractions*. ☐ *Minor Offenses* are documented on district-approved forms (Low Level Referrals). ☐ *Major Infractions* are documented on district-approved forms (Office Referrals).	☐ >80% of referrals accurately distinguish *Minor Offenses* from *Major Infractions*. ☐ >90% of referrals are completed in a uniform manner. ☐ Office staff process referrals in a uniform manner.	☐ Administration monitors and enforces the referral form process. ☐ Upon arrival, new staff are trained in the use of district-approved forms. ☐ Referral processes are reviewed and modified at the end of each school year.
Referral Information System	☐ The school adopts a database capable of tracking and reporting referral information. ☐ Staff is trained to input data and generate reports. ☐ Admin/PBS Team are trained to analyze referral data/reports.	☐ Staff enters referral information into the database weekly (minimum). ☐ Admin/PBS Team review referral reports and identify the systemic challenges to address with staff. ☐ Staff development is lead with a focus on the analysis of referral data.	☐ Referral data is used to identify school-wide, group, and individual successes and challenges. ☐ Staff consistently reviews and responds to current referral data.
Universal Expectations & Rules	☐ The school adopts 3-5 positively stated expectations. ☐ Expectations are defined in behaviorally specific terms (rules). ☐ Rules are generated for all common areas and posted throughout the school.	☐ An annual training schedule is created to teach the expectations and rules school-wide. ☐ Staff routinely acknowledge and correct student behaviors in accordance with the expectations and rules.	☐ >80% of students are able to state the rules and provide examples. ☐ New students are systematically taught expectations and rules. ☐ New staff is trained to teach, acknowledge, and enforce the expectations and rules.
School-Wide Social Skills Instruction	☐ Staff commits to teach developmentally appropriate social skills (daily or weekly). ☐ School adopts a research-based social skills curriculum to use on a school-wide basis.	☐ PBS Team develops a school-wide social skills lesson schedule and provides staff with necessary instructional materials. ☐ Social skills instruction takes place in >80% of designated classes at the assigned time.	☐ Modifications are made to the schedule as needed. ☐ >80% of students are able to state the social skills lesson/provide examples. ☐ New staff is provided necessary training and instructional materials.
School-Wide Acknowledgement System	☐ >80% of staff commits to acknowledging appropriate student behavior. ☐ School commits to establishing a staff acknowledgement system.	☐ PBS Team establishes procedures to implement acknowledgement systems. ☐ >80% of staff utilizes the student incentive program. ☐ A staff acknowledgement system is in place/functional.	☐ Staff consistently acknowledges appropriate student behaviors. ☐ Analysis of student and staff acknowledgement systems results in refinement to guidelines and practices.
School-Wide Interventions & Consequences	☐ Admin/PBS Team review the district's *Progressive Discipline Matrix (PDM).* ☐ Staff members are provided an overview and	☐ Staff is trained to utilize a variety of interventions and consequences to address *Minor Offenses* and *Major Infractions.* ☐ >80% of staff	☐ Staff routinely evaluates data to determine the effectiveness of interventions/consequences. ☐ PBS Team routinely

EVIDENCE:	COMMITMENT Stage 1	IMPLEMENTATION Stage 2	DURABILITY Stage 3
	copy of the district's *PDM.* ☐ Staff commit to utilizing a variety of interventions to correct *Minor Offenses* and *Major Infractions.*	establishes/utilizes a variety of interventions to correct *Minor Offenses.* ☐ The administrative staff establishes/utilizes a variety of interventions to correct *Major Infractions.*	provides staff development, modifies the environment, and refines processes/procedures based identified needs. ☐ New staff is trained in utilizing a variety interventions and consequences.
Managing Common Areas	☐ Common area data is collected and reviewed to determine supervision effectiveness (observations, audits, referrals, suspensions). ☐ Staff adopts a proactive supervision policy.	☐ Staff is trained to utilize proactive supervision practices. ☐ Procedures are established to evaluate and enforce proactive supervision.	☐ On-going analysis of data from the common areas results in additional training and refining of practices and procedures. ☐ New staff is trained to utilize proactive supervision practices.
Individual Behavior Support Planning	☐ A team is trained to assist the school in the development of individual Behavior Support Plans (BSP).	☐ BSPs are developed within a team setting (smaller learning community, SST, 504, IEP). ☐ Staff responsible for BSP implementation is involved in development of the plan.	☐ BSPs are monitored and modified as needed. ☐ The BSP process is evaluated to ensure high quality plans are being written and implemented with integrity.
Behavior Emergency Procedures	☐ Staff is trained to use verbal de-escalation strategies and identify students in crisis. ☐ Administration establishes a team to respond to students deemed a danger to themselves and/or others.	☐ Procedures are in place to support staff in the use of verbal de-escalation strategies. ☐ Response team attends district-approved training. ☐ Admin and response team develops behavioral emergency procedures and distributes them to staff.	☐ Continued analysis of behavior emergency procedures results in necessary improvements, modifications, and trainings for staff. ☐ Response team meets twice yearly to practice emergency responses and review school plan.
Comprehensive Network of Support	☐ Admin and PBS Team ensure Tier One behavior supports are available to all students. ☐ Procedures are established to identify students who require Tier Two and Tier Three supports. ☐ Tier Two and Tier Three supports are established based on identified need.	☐ School resources are integrated to support at-risk students. ☐ Targeted skill development is provided to groups of students identified through data. ☐ Function-based interventions are provided to groups of students identified through data. ☐ A school-based team monitors the effectiveness of Tier Two and Tier Three supports.	☐ A school-based team reviews Tier Two and Tier Three individual student data to determine appropriate levels of support. ☐ Highly structured school-based alternative classes are available to students identified through data. ☐ District and community resources are integrated to support high-risk students.

APPENDIX E

DETAILED DESCRIPTION OF IMPLEMENTATION

Detailed Description of Implementation

Step 1. The purpose of this step is to gain the school site administrator's support which is necessary in order to insure sustainability (Ervin et al., 2007; Luiselli et al., 2005; Stollar et al., 2006; Warren, et al., 2003). So, the first activity completed by the PBS coaches was to meet with each site level administrator to explain the SWPBIS process, benefits and expectations, as well as formally obtain the administrator's support. The administrators agreed to provide the following support: establish a leadership team, share decision making with the leadership team, dedicate and schedule time for the leadership team to regularly meet, as well as provide staff training. The administrators were responsible for allotting time on the monthly staff agenda so information about SWPBIS implementation could be shared.

The established leadership teams need to include key staff members who are respected by their peers and representative of the school community. The leadership should consist of the administrator, staff, students, parents, and other community stakeholders (Bradshaw et al., 2010; Freeman et al., 2006; George, White, & Schlaffer, 2007; Handler et al., 2007; Simenson et al., 2007; Stollar, Poth, Curtis, & Cohen, 2006; Sugai, Horner et al., 2000; Sugai & Horner, 2002; Sugai & Horner, 2006; Taylor-Green et al., 1997; Warren et al., 2006). The PBS coaches used a questioning process to assist the administrators with selecting the members of the leadership teams, this process ensured all community stakeholders were represented.

Shortly after the formation of each school sites' leadership teams, meetings with the PBS coaches were scheduled. The purpose of these meetings were for the team members to gain an understanding of the SWPBIS framework, the tiered approach to address behaviors, as well as the tasks the team is expected to accomplish. In order to support the completion of the implementation process, it is beneficial for the team to understand the stages of implementation (Bradshaw, Debnam, Koth, & Leaf, 2009), so during this meeting, the PBS coaches provided the leadership teams with information and a graphic on the stages of implementation. The members of the leadership teams were asked to sign an agreement stating their commitment to the process. Once every one on the leadership teams signed commitment to the process, each member was assigned his/her role and the team's norms were defined. All of the tasks completed during these meetings with the PBS coaches were documented on a form, which was used to track the outcome as well as completion of Step 1.

Step 2. During this step much of the focus was on the leadership teams reviewing if the schools sites were ready to implement SWPBIS. The leadership team took an honest look at how their school site functions by reviewing available data (Stollar, Poth, Curtis, & Cohen, 2006). The PBS coaches assisted the team with determining if the staff functioned as a unified unit with a common vision and equal respect demonstrated towards all members of the staff, or were there value distinctions. It was expected that each leadership teams keep minutes for all meetings including the outcomes. These minutes were used by the PBS

coaches to monitor and review the implementation process to determine what support the site needed with implementation.

The activities completed by the leadership teams during this step included defining "all" staff. The PBS coaches worked very closely with the teams to ensure all members of the school community were considered. The administrators provided the leadership teams with time during a staff meeting to introduce the PBS initiative to the full staff. A PowerPoint presentation, as well as handouts, were developed by the PBS coaches and provided during the meeting. Upon completion of the presentation, all staff members were asked to complete a survey in order to provide the leadership teams with an understanding of what were the greatest challenges facing the school sites and how many staff members were committed to the concept of SWPBIS. The PBS coaches assisted the leadership teams with analyzing the information obtained from the survey and helped the teams define the school's challenges. The site administrators and leadership teams shared the survey results with the full staff and continued to work towards the goal of gaining 80% or more of the staff to be committed to the implementation of SWPBIS.

Step 3. As stated above, it is important for the administrators and leadership teams to obtain 80% or more of the staff committed to the SWPBIS process. One method of achieving this is through involving all staff members in the implementation process through continuous, honest communication. According to Ryndack et al. (2007) it is important for the leadership team to

develop communication systems with the school staff in which visibility is created and understanding is ensured. So during the completion of this step, the leadership teams established communication patterns with all staff, which included creating PBS bulletin boards in a centralized location, using staff meetings to update the staff and email to distribute information. The bulletin boards contained the following information: general information about SWPBIS, the names of the leadership team members, the leadership team meeting minutes, an overview of the steps for implementing SWPBIS, new policies and procedures and an envelope for staff members to leave comments, suggestions or questions.

Also during this step the leadership teams developed three to five common expectations that were defined by location (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008; Lassen, Steele, & Sailor, 2006; Metzler, Biglan, Rusby, & Sprague, 2001; Sugai & Horner, 2002; Sugai & Horner, 2004; Warren, et al., 2006). The PBS coaches provided the teams with three suggested expectations that the team could use, *'Be safe', 'Be responsible' and 'Be respectful'*. The teams were also provided examples for how to define the expectation by location. In order to achieve staff buy-in to the expectations, copies of the proposed expectations, defined by location, were distributed to everyone for review and feedback. At the same time, the teachers were also provided an opportunity to define the expectations for their classroom and were provided a template that needed to be completed and returned to the leadership team.

Every one of these steps were documented and dated on the form in order for the PBS coaches to track and monitor completion.

Step 4. A critical component of the implementation process is for the whole school system to embrace the SWPBIS philosophy and be willing to implement (Sugai & Horner, 2006). That is why this step focused on obtaining signed commitment from every staff member. The leadership team worked with the school staff to change the school culture and environment instead of focusing on individual student behaviors (Chitiyo & Wheeler, 2009; Metzler, Biglan, Rusby, & Sprague, 2001; Warren, et al., 2003). The staff commitment entailed the following: work together to create a safe and welcoming environment for all students, learn new skills and responses for addressing student behavior, and gain an understanding that student behavior will change when staff behavior changes.

For successful implementation of SWPBIS, 80% or more of the staff needed to be in agreement (Sugai and Horner, 2002), so it was important for the leadership team to monitor the staff commitment. The PBS coaches worked with the leadership teams of school sites that had difficulty reaching the 80% mark. The PBS coaches posed questions to the leadership team to assist them with identifying the implementation barriers. The questions included the following topics, does the staff share a common belief that change is or is not necessary? Was there a clear explanation of SWPBIS and was it clearly understood? Has the staff experienced 'false-starts' in the past and are they experiencing 'program

fatigue'? Lastly, are the discipline problems so intense at the school that staff cannot see any hope? It was imperative for the leadership teams to determine what the barriers were and provide the appropriate training, skills and/or information prior to moving forward with implementation.

Once 80% or more of the staff were committed, the leadership teams introduced the 'school-wide behavior of the week" which taught all students and staff the expectations of the school. Past research has determined that prior to implementation expectations need to be clearly defined and taught and a system that promotes staff to reinforce the use of the newly learned behavior skill be established (Bradshaw, Koth et al., 2008; Bradshaw et al., 2010; Freeman et al., 2006, Luiselli et. al., 2005; Mass-Galloway, Panyan, Smith, & Wessendorf, 2008; McCurdy et al., 2007; Metzler et al., 2001; Sugai & Horner, 2002; Sugai & Horner, 2006; Taylor- Green et al., 1997; Warren, 2007). The leadership team, with the PBS coaches' assistance, developed lesson plans and prioritized and scheduled when the expectation would be taught. The PBS coaches provided the leadership teams with graphics to assist with prioritizing the behaviors, ideas for disseminating and posting the school-wide expectations, as well as PowerPoint presentations that can be used to teach the various expectations as well as quizzes for monitoring students' understanding of the lessons.

Step 5. In this step, the leadership teams determined ways for acknowledging students who demonstrated understanding of the expectations and ways for correcting students who needed further assistance with

understanding the expectations (Bradshaw, Koth et al., 2008; Bradshaw et al., 2010; Lassen et al., 2006, p. 704; Metzler et al., 2001, p. 475; Sugai & Horner, 2002, p. 33; Warren et al., 2006, p. 189). To insure the school staff understood, the district developed a Progressive Discipline Matrix, and the PBS coaches provided training and distributed a copy of the matrix to all staff. The purpose of the document was to ensure consistency on how discipline was administered and inappropriate behaviors were corrected. At the same training, the PBS coaches trained the staff on appropriate use and application of consequences. The staff learned the difference between behaviors that should be handled within the classroom and those that require the support of the administrator. Two different referral forms were developed and used for gathering behavior data. The date the PBS coaches trained the staff was documented and used to track and monitor the implementation of SWPBIS.

Step 6. This step had the leadership team work closely with staff to provide assistance with using and completing the appropriate referral forms. Since the leadership teams used office discipline referral data to monitor the implementation of SWPBIS (Hawken, Vincent, & Schumann, 2008) as well as identify at-risk students (McIntosh, Chard, Boland, & Horner, 2006), the accuracy of the completion of the referral forms was monitored. The leadership teams provided training and ensured all staff were aware of the policies and procedures regarding referrals. Staff were required to implement the referral forms and

procedures by a certain date. As a form of accountability, the PBS coaches monitored this implementation.

The leadership team also determined how many low level offenses equal a 'chronic' offense which required the student to receive an office discipline referral. The leadership teams also inventoried the behavior interventions available at the school site, plus indentified other interventions that may need to be implemented. During a staff meeting, the PBS coaches and leadership teams provided information on the various interventions available at the school site, as well as how to identify the appropriate intervention to address inappropriate behaviors.

Step 7. The establishment of a positive school climate was the focus of the leadership teams during this step because the success of SWPBIS was contingent on the ability to establish a caring environment where supportive relationships exist (Mass-Galloway, Panyan, Smith, & Wessendorf, 2008). The PBS coaches audited the school by observing for five minutes in all classrooms and common areas. The number of positive and negative statements made was documented. This information was analyzed by the leadership teams to determine what changes were needed and/or training required. The data were shared with the full staff.

The leadership teams and the PBS coaches trained staff on how to build positive relationships and the use of incentives. The staff participated in a survey about incentives. The purpose of the survey was to gauge the staff's

understanding of, and willingness to implement an incentive program. Like the implementation of SWPBIS system, this also required 80% of the staff to be willing to implement the incentive program. The information gathered was analyzed to help shape the incentive program which was shared during the staff meeting.

Step 8. During this step, the administrators and leadership teams reviewed office discipline referrals to determine how many "chronic" minor offenses were being sent to the office. This review made sure the forms were filled out correctly. The teams also checked to determine if the 'behavior of the week' was being taught, through observing staff and interviewing students.

The leadership teams formalized a reward plan for both students and staff. They identified both low frequency and high frequency incentives. Low frequency incentives are occasionally provided because they are large prizes. The leadership team also secured enough incentives so the reward system was viable. The coaches had each leadership team select an incentive for staff, as well as presented the incentive program.

Since most of the components for establishing a tier one have been developed and implemented by step 8, the leadership teams started investigating interventions for tier two. The coaches worked with the leadership teams to identify a social skills intervention program to purchase.

Step 9. It is important that the school site establish a system for monitoring and evaluating the process and progress of SWPBIS (Bradshaw et

al., 2010; Ervin et al., 2007; Warren et al., 2006). One piece of data that should be reviewed to monitor the implementation process is office discipline referrals (Hawken, Vincent, & Schumann, 2008). During this step, the leadership teams reviewed the collected office discipline data. The data was reviewed for clearer understanding of the incident rates, locations and dynamics to determine what affected student behaviors. This review helped to identify appropriate interventions. To assist with this process, the administrators selected a classified employee to collect and input all the office discipline referral data into the data system. The administrators oversaw this process and ensured that all critical data fields were being completed.

To build the capacity of the school staff to deal with tier 3 extreme behavior emergencies, training on verbal de-escalation techniques was provided and crisis prevention teams were formed. Also during this step leadership teams reviewed their own commitment and recruited new members as needed. The team evaluated the implementation of SWPBIS by completing the use of the district developed framework which reviewed all components of the system for implementation. The results of the evaluation were shared with all staff members, and accomplishments were celebrated.

APPENDIX F

SUMMARY OF PARTICIPANTS

Summary of Participants

School / Variable	Spring 2004	Spring 2005	Spring 2006	Spring 2007	Spring 2008	Spring 2009	Spring 2010
A							
Implementation	3	14	52	52	69	85	90
ODRs		4996	2433	2124	1861	1557	1502
Suspensions		790	689	551	567	718	549
Expulsions		18	10	5	3	2	2
Truancy		1629	897	640	679	800	872
CST Mean Scores ELA -6	296.1	299.1	305.4	303.3	313.5	324.9	331.3
CST Mean Scores ELA -7	299.3	304.3	312.9	313	314.2	325.2	322.9
CST Mean Scores ELA -8	298.3	301.8	313.6	305.2	314.9	321.5	327.3
CST Mean Math -6	293.2	292.6	304.4	297.1	301.4	316.7	327.5
CST Mean Math -7	294.5	297.2	310.1	313	311.3	314.1	334.9
B							
Implementation			23	24	43	47	54
ODRs			2742	1707	1528	1146	879
Suspensions			334	559	667	631	466
Expulsions			4	3	3	0	1
Truancy			736	699	500	393	279
CST Mean Scores ELA -6			313	307	309.1	329.3	331.6
CST Mean Scores ELA -7			320.5	319.7	320	344.2	340.7
CST Mean Scores ELA -8			317.4	311.7	312	326.3	336.1
CST Mean Math -6			320.5	307.9	309.6	329.1	328
CST Mean Math -7			331.2	315.8	324.3	338.6	329.5
C							
Implementation	0	63	69	69	73	78	78
ODRs		3382	1764	1657	1976	1169	1520
Suspensions		350	453	550	821	760	599
Expulsions		8	1	7	4	0	3
Truancy		998	977	784	779	649	595
CST Mean Scores ELA -6	299	302.6	306.1	296.8	305.7		
CST Mean Scores ELA -7	301.6	310.9	322.2	319.6	314.2	317.4	322.6
CST Mean Scores ELA -8	296.2	310.4	309.5	314.6	311	312.1	324.4

CST Mean Math -6	293.2	292.6	308.2	300.8	302.5		
CST Mean Math -7	305	312.3	316.4	313.7	305.7	318.5	331.1
D							
Implementation	0	2	33	35	49	7	47
ODRs				3907	3061		
Suspensions		1018	955	1225	1634	1186	1041
Expulsions		17	10	9	7	7	3
Truancy		681	782	750	801	679	818
CST Mean Scores							
ELA -6	299	297.3	309.2	304.2	307.6	316.2	310.2
CST Mean Scores							
ELA -7	301.6	303.3	305.4	310.5	312.8	323.6	323.5
CST Mean Scores							
ELA -8	296.2	307.1	308	297.7	306.4	317.9	320
CST Mean Math -6	293.2	292.4	310	308.7	311.1	319.2	305.3
CST Mean Math -7	305	289.9	309.3	315.9	318.4	317.3	331.4
E							
Implementation	0	1	22	22	78	88	88
ODRs		3626	4038	1594	1560		1365
Suspensions		511	697	628	604	878	707
Expulsions		3	6	3	5	9	
Truancy		428	466	426	419	525	352
CST Mean Scores							
ELA -6	307.9	309.9	300.2	314.4	314.3	321.3	333
CST Mean Scores							
ELA -7	317.2	326.6	316.8	316.9	319	324.3	326.4
CST Mean Scores							
ELA -8	314.9	321.2	319.7	316.8	315.1	316	328.7
CST Mean Math -6	309.8	321.2	310.8	324.3	332.4	328.6	340.9
CST Mean Math -7	326.4	333.9	330.8	319.6	317.2	322.5	323.5
F							
Implementation	0	0	33	31	87	90	90
ODRs			2510	1391	1344	1070	
Suspensions		901	884	474	577	915	589
Expulsions		11	3	5	5	6	3
Truancy		801	616	522	471	523	560
CST Mean Scores							
ELA -6	300.5	297.3	302.9	301.1	308.5	317.1	320.1
CST Mean Scores							
ELA -7	300.5	302.5	315.3	305.6	322.3	320	324.2
CST Mean Scores							
ELA -8	308.4	301.3	311.7	307.7	309.7	318.2	322.7
CST Mean Math -6	299.2	304.1	294.6	300.3	297.2	317.1	313
CST Mean Math -7	298.3	299.2	306.6	303.8	308.4	320	323.1

G							
Implementation	0	4	47	52	14	35	52
ODRs		3396	2618	2645	1533	1398	1069
Suspensions		632	662	645	827	898	756
Expulsions		5	3	4	11	5	3
Truancy		897	634	609	589	507	438
CST Mean Scores ELA -6	298.6	303.1	315.2	299.7	308	.	.
CST Mean Scores ELA -7	313.1	320.1	330	327.4	320.2	331.1	329.7
CST Mean Scores ELA -8	310.7	313.6	324.4	320.5	320.2	325.2	328.9
CST Mean Math -6	323.2	316.8	327.2	299.7	298.9		
CST Mean Math -7	308.7	321.7	323.7	327.4	310.3	309.7	318.9
H							
Implementation	0	1	49	44	59	65	90
ODRs			3584	2518	2662	1717	1415
Suspensions		591	604	630	835	804	575
Expulsions		12	9	4	7	6	0
Truancy		803	372	684	770	717	475
CST Mean Scores ELA -6	302.1	304.3	294.7	299.1	306.8	330.2	327.2
CST Mean Scores ELA -7	314.4	321.3	307	304.2	314.3	326.4	333.1
CST Mean Scores ELA -8	309.5	320.6	305.6	307.8	314.7	323.5	331.4
CST Mean Math -6	316.8	307.7	290.3	294.5	301.9	339.4	324.3
CST Mean Math -7	327.6	320.6	305.9	297.9	306.7	315.8	331.2

REFERENCES

Algozzine, K., & Algozzine, B. (2007). Classroom instructional ecology and school-wide positive behavior support. *Journal of Applied School Psychology , 24*(1), 29-47. DOI:10.1300/J370v24n01_02

Baker, J. A. (1999). Teacher-student interaction in urban at-risk classrooms: Differential behavior, relationship quality, and student stasifaction with school. *The Elementary School Journal, 100(1)*, 57-70. DOI:10.1086/461943

Barrett, S. B., Bradshaw, C. P., & Lewis-Palmer, T. (2008). Maryland statewide PBIS initiative: Systems, evaluation, and next steps. *Journal of Positive Behavior Interventions, 10(2)*, 105-114. DOI:10.1177/1098300707312541

Barrett, S., Lewis-Palmer, T., & Sugai, G. (2004, April). *Coach's implementation checklist.* Retrieved November 11, 2010, from Educational and Community Supports: http://pbismanual.uoecs.org/coachchecklist.htm

Bradshaw, C. P., Barrett, S., & Bloom, J. (2004). *The implementation phase inventory.* Retrieved November 4, 2010, from PBIS Maryland: http://www.pbismaryland.org/forms.htm

Bradshaw, C. P., Debnam, K., Koth, C. W., & Leaf, P. (2009). Preliminary validation of the implementation phases inventory for assessing fidelity of

schoolwide positive behavior supports. *Journal of Positive Behavior Interventions, 11(3)*, 145 – 160. DOI:10.1177/1098300708319126

Bradshaw, C. P., Koth, C. W., Bevans, K. B., Ialongo, N., & Leaf, P. J. (2008). The impact of school-wide positive behavior interventions and supports (PBIS) on the organizational health of elementary schools. *School Psychology Quarterly, 23(4)*, 462-473. DOI:10.1037/a0012883

Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of school-wide positive behavioral interventions and supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions, 12(3)*, p.133-148. DOI:10.1177/1098300709334798

Bradshaw, C. P., Reinke, W. M., Brown, L. D., Beavans, K. B., & Leaf, P. J. (2008). Implementation of school-wide positive behavioral interventions and supports (PBIS) in elementary schools: Observations from a randomized trial. *Education and Treatment of Children, 31(1)*, 1-26. http://educationandtreatmentofchildren.net/

Brown, L. H., & Beckett, K. S. (2006). The role of the school district in student discipline: Building consensus in Cincinnati. *The Urban Review, 38(3)*, 235-256. DOI:10.1007/s11256-006-0032-8

California Department of Education[a] (2010, May). Retrieved April 14, 2011, from California Department of Education: http://www.cde.ca.gov/ta/ac/ap/

California Department of Education[b] (2010, May). *2010 STAR test results help: Comparing test results.* Retrieved March 26, 2011, from California Department of Education: http://star.cde.ca.gov/star2010/help_comparescores.asp

California Department of Education[a], (2011). *California standards tests technical report: spring 2010 administration.* Retrieved May 11, 2011, from California Department of Education: http://www.cde.ca.gov/ta/tg/sr/documents/csttechrpt2010.pdf

California Department of Education[b] (2011). *Assessment and Accountability.* Retrieved August 21, 2011, from California Department of Education: www.cde.ca.gov.

Carr, E. G., Dunlap, G., Horner, R. H., Koegel, R. L., Turnbull, A. P., Sailor, W., . . . Fox, L. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions, 4(1),* 4-16, 20. DOI:10.1177/109830070200400102

Chitiyo, M., & Wheeler, J. J. (2009). Challenges faced by school teachers in implementing positive behavior support in their school systems. *Remedial and Special Education, 30(1),* 58-63. DOI:10.1177/0741932508315049

Clonan, S. M., McDougal, J. L., Clark, K., & Davison, S. (2007). Use of office discipline referrals in school-wide diecision making: A practical example. *Psychology in the Schools, 44(1)*, 19-27. DOI:10.1002/pits.20202

Cohen, R., Kincaid, D., & Childs, K. E. (2007). Measuring school-wide positive behavior support implementation: Devlopment and validation of the benchmark of quality. *Journal of Positive Behavior Interventions, 9(4)*, 203-213. DOI:10.1177/10983007070090040301

Elliott, D. S., & Mihalic, S. (2004). Issues in disseminating and replicating effective prevention programs. *Prevention Science, 5(1)*, 47-52. DOI:10.1023/B:PREV.0000013981.28071.52

Ervin, R. A., Schaughency, E., Matthews, A., Goodman, S. D., & McGlinchey, M. T. (2007). Primary and secondary prevention of behavior difficulties: Developing a data-informed problem-solving model to guide decision making at a school-wide level. *Psychology in the Schools, 44(1)*, 7-18. DOI:10.1002/pits.20201

Evans, A. E. (2007). School leaders and their sensemaking about race and demographic change. *Educational Administration Quarterly, 43(2)*, 159-188. DOI:10.1177/0013161X06294575

Farrell, A. F. (2009). Building schoolwide positive behavior supports. In R. W. Christner, & R. B. Mennuti, *School-based mental health: A practitioner's*

guide to comparative practices (pp. 87-124). New York: Routledge/Taylor & Francis Group.

Fenning, P., & Rose, J. (2007). Overrepresentation of African American students in exclusionary discipline:The role of school policy. *Urban Education, 42(6)*, 536-559. DOI:10.1177/0042085907305039

Freeman, R., Eber, L., Anderson, C., Irvin, L., Horner, R., Bounds, M., & Dunlap, G. (2006). Building inclusive school cultures using school-wide positive behavior support: Designing effective individual support systems for students with significant diabilities. *Resarch & Practice for Persons with Severe Disabilities, 31(1)*, 4-17. http://www.tash.org/publications/rpsd/rpsd.html

George, H. P., & Kincaid, D. K. (2008). Building district-level capacity for positive behavior support. *Journal of Positive Behavior Interventions,10(1)*, 20-32. DOI:10.1177/1098300707311367

George, M. P., White, G. P., & Schlaffer, J. J. (2007). Implementing school-wide behavior change: Lessons from the field. *Psychology in the Schools, 44*(1), 41-51. DOI:10.1002/pits.20204

Gerrig, R. J. & Zimbardo, P. G., (2002). Psychology and life, 16th Ed. Retrieved from http://www.apa.org/research/action/glossary.aspx

Handler, M. W., Rey, J., Connell, J., Thier, K., Feinberg, A., & Putman, R. (2007). Practical considerations in creating school-wide positive behavior support in public schools. *Psychology in the Schools, 44*(1), 29-39. DOI:10.1002/pits.20203

Hawken, L. S., Vincent, C. G., & Schumann, J. (2008). Response to intervention for social behavior: Challenges and opportunities. *Journal of Emotional and Behavioral Disorders, 16(4)*, 213-225. DOI:10.1177/1063426608316018

Horner, R. H., Sugai, G., Smolkowski, K., Eber, L., Nakasato, J., Todd, A. W., & Esperanza, J. (2009). A randomized, wait-list controlled effectiveness trial assessing school-wide positive behavior support in elementary schools. *Journal of Positive Behavior Interventions, 11(3)*, 133-144. DOI:10.1177/1098300709332067

Horner, R. H., Todd, A. W., Lewis-Palmer, T., Irvin, L. K., Sugai, G., & Boland, J. B. (2004). The school-wide evaluation tool (SET): A research instrument for assessing school-wide positive behavior support. *Journal of Positive Behavior Interventions,* 6(1), 3-12. DOI:10.1177/10983007040060010201

Howell, D. C., (2008). Fundamental statistics for the behavioral sciences, 6th. Belmont, CA: Thomson Wadsworth.

Irvin, L. K., Tobin, T. J., Sprague, J. R., Sugai, G., & Vincent, C. G. (2004). Validity of office discipline referral measures as indices of school-wide

behavioral status and effects of school-wide behavioral interventions. *Journal of Positive Behavior Interventions, 6(3),* 131-147. DOI:10.1177/10983007040060030201

Johns, S., & Patrick, J. (2010). Positive behavior support framework. Retrieved March 14, 2010, from MODEL Program: http://modelprogram.com/homepage.html

Johns, S., & Patrick, J. (2010, March). Analyzing data [Lecture notes]. San Bernardino, CA: Authors.

Kincaid, D., Childs, K., Blase, K. A., & Wallace, F. (2007). Identifying barriers and facilitators in implementing schoolwide postive behavior support. *Journal of Positive Behavior Interventions, 9(3)*, 174-184. DOI:10.1177/10983007070090030501

Koth, C. W., Bradshaw, C. P., & Leaf, P. J. (2008). A multilevel study of predictors of student perceptions of school climate: The effect of classroom-level factors. *Journal of Educational Psychology, 100(1)*, 96-104. DOI:10.1037/0022-0663.100.1.96

Lassen, S. R., Steele, M. M., & Sailor, W. (2006). The relationship of school-wide positive behavior support to academic achievement in an urban middle school. *Psychology in the Schools , 43*(6), 701-712. DOI:10.1002/pits.20177

Lewis, T. J., Powers, L. J., Kelk, M. J., & Newcomer, L. L. (2002). Reducing problem behaviors on the playground: An investigation of the application of schoolwide positive behavior supports. *Psychology in the Schools, Vol. 39(2)*, 181-190. DOI:10.1002/pits.10029

Lewis, T. J., & Sugai, G. (1999). Effective behavior support: A systems approach to proactive schoolwide management. *Focus on Exceptional Children, 31(6)*, 1-19. http://www.lovepublishing.com/catalog/focus_on_exceptional_children_31.html

Lewis, T. J., Sugai, G., & Colvin, G. (1998). Reducing problem behavior through a school-wide system of effective behavioral support: Investigation of a school-wide social skills training program and contextual interventions. *School Psychology Review, 27(3)*, 446-460. http://nasponline.org/publications/spr/index.aspx?vol=27&issue=3

Lohrmann, S., & Talerico, J. (2004). Anchor the boat: A classwide intervention to reduce problem behavior. *Journal of Positive Behavior Interventions, 6(2)*, 113-120. DOI:10.1177/10983007040060020601

Luiselli, J. K., Putnam, R. F., Handler, M. W., & Feinberg, A. B. (2005). Whole-school positive behaviour support: Effects on student discipline problems and academic performance. *Educational Psychology, 25(2–3)*, 183–198. DOI:10.1080/0144341042000301265

Luiselli, J. K., Putman, R. F., & Sunderland, M. (2002). Longitudinal evaluation of behavior suport intervention in a public middle school. *Journal of Positive Behavior Interventions, 4(3)*, 182-188. DOI:10.1177/10983007020040030701

Mass-Galloway, R. L., Panyan, M. V., Smith, C. R., & Wessendorf, S. (2008). Systems change with school-wide positive behavior supports. *Journal of Positive Behavior Interventions,10(2)*, 129-135. DOI:10.1177/1098.100707.112545

Mattison, E., & Aber, M. S. (2007). Closing the achievement gap: The association of racial climate with achievement and behavioral outcomes. *American Journal Community Psychology, 40*, 1-12. DOI:10.1007/s10464-007-9128-x

McCurdy, B. L., Kunsch, C., & Reibstein, S. (2007). Secondary prevention in the urban school: Implementing the behavior education program. *Preventing School Failure, 51(3)*, 12-19. DOI:10.3200/PSFL.51.3.12-19

McIntosh, K., Campbell, A. L., Carter, D. R., & Dickey, C. R. (2009). Differential effects of tier two behavior intervention based on function of problem behavior. *Journal of Positive Behavior Interventions, 11(2)*, 82-93. DOI:10.1177/1098300708319127

McIntosh, K., Chard, D. J., Boland, J. B., & Horner, R. H. (2006). Demonstration of combined efforts in school-wide and behavioral systems and incidence of reading and behavior challenges in early elementary grades. *Journal of Positive Behavior Interventions, 8(3)*, 146-154. DOI:10.1177/10983007060080030301

Mcintosh, K., Filter, K. J., Bennett, J. L., Ryan, C., & Sugai, G. (2010). Principles of sustainable prevention: Designing scale-up of school-wide positive behavior support to promote durable systems. *Psychology in the Schools, 47(1)*, 5-21. DOI:10.1002/pits.20448

McLaren, P. (2005). Critical pedagogy and the social construction of knowledge. In E. R. Brown, & K. J. Saltman, *The Critical Middle School Reader,* 409-417. New York: Taylor & Francis Group.

Medley, N. S., Little, S. G., & Akin-Little, A. (2008). Comparing individual behavior plans from schools with and without schoolwide positive behavior support: A preliminary study. *Journal of Behavioral Education, 17*, 93-110. DOI 10.1007/s10864-007-9053-y

Metzler, C. W., Biglan, A., Rusby, J. C., & Sprague, J. R. (2001). Evaluation of a comprehensive behavior management program to improve school-wide positive behavior support. *Education and Treatment of Children, 24*(4), 448-479. http://wvupressonline.com/journals/etc

Mobokela, R. O., & Madsen, J. (2003). Crossing boundaries: African American teachers in suburban schools. *Comparative Education Review, 47(1)*, 90-111. DOI:10.1086/345838

Morrissey, K. L., Bohanon, H., & Fenning, P. (2010). Positive behavior support: Teaching and acknowledging expected behaviors in an urban high school. *Teaching Exceptional Children,* (42)5, p. 26-35.

Muscott, H. S., Mann, E., Benjamin, T. B., Gately, S., Bell, K. E., & Muscott, A. J. (2004). Positive behavioral interventions and supports in New Hampshire: Preliminary results of a statewide system for implementing schoolwide discipline practices. *Education & Treatment of Children, 27(4)*, 453-475. http://educationandtreatmentofchildren.net/

Nelson, J. R., Martella, R. M., & Marchand-Martella, N. (2002). Maximizing student learning: The effects of a comprehensive school-based program for preventing problem behaviors. *Journal of Emotional and Behavioral Disorders, 10(3)*, 136-148. DOI:10.1177/10634266020100030201

Netzel, D. M., & Eber, L. (2003). Shifting from reactive to proactive discipline in an urban school district: A change of focus through PBIS. *Journal of Positive Behavior Interventions, 5(2)*, 71-79. DOI:10.1177/10983007030050020201

Oswald, K., Safran, S., & Johanson, G. (2005). Preventing trouble: Making schools safer places using positive behavior supports. *Education and*

Treatment of Children, 28(3), 265-278. http://educationandtreatmentofchildren.net/

Riehl, C. (2000). The principal's role in creating inclusive schools for diverse students: A review of normative, empirical, and critical literature on the practice of educational administration. *Review of Educational Research, 70(1)*, 55-81. DOI:10.3102/00346543070001055

Rodriguez, L. F. (2008). Struggling to recognize their existence: Examining student-adult relationships in the urban high school context. *Urban Review, 40*, 436-453. DOI:10.1007/s11256-008-0091-0

Ryan, J. (2003). Educational administrator's preceptions of racism in diverse school contexts. *Race Ethnicity and Education, 6(2)*, 145-164. DOI:10.1080/13613320308197

Ryndack, D. L., Reardon, R., Benner, S. R., & Ward, T. (2007). Transitioning to and sustaning district-wide inclusive services: A 7 year study of a district's ongoing journey and its accompanying complexities. *Research & Practice for Persons with Severe Disabilities, 32(4)*, 228-246. http://www.tash.org/publications/rpsd/rpsd.html

Safran, S. (2006). Using the effective behavior supports survey to guide development of schoolwide positive behavior support. *Journal of Positive Behavior Interventios, 8(3)*, 3-9. DOI:10.1177/10983007060080010201

Safran, S. P., & Oswald, K. (2003). Positive behavior supports: Can schools reshape disciplinary practices? *Exceptional Children, 69(3)*, 361-373. http://www.cec.sped.org/AM/Template.cfm?Section=Home&TPPID=2853&CONTENTID=4526&TPLID=23&TEMPLATE=/TaggedPage/TaggedPageDisplay.cfm

Scott, T. M., & Barrett, S. B. (2004). Using staff and student time engaged in disciplinary procedures to evaluate the impact of school-wide PBS. *Journal of Positive Behavior Interventions, 6(1)*, 21-27. DOI:10.1177/10983007040060010401

Scott, T. M., & Eber, L. (2003). Functional assessment and wraparound as systemic school processes: Primary, secondary, and tertiary systems examples. *Journal of Positive Behavior Intervention, 5(3)*, 131-143. DOI:10.1093/brain/awp200

Simonsen, B., Sugai, G., & Fairbanks, S. (2007). School-wide positive behavior support: Preventing the development and occurrence of problem behavior. In S. W. Evans, M. D. Weist, & Z. N. Sempell, *Advances in school –based mental health interventions: Best practices and program models, V. II* (pp. 8.1-8.17). Kingston, N.J.: Civic Research Institute.

Skiba, R. (2004). Zero tolerance: The assuptions and the facts. *Education Policy Briefs - The Center for Evaluation & Education Policy, 2(1)*, 1-8. http://ceep.indiana.edu/

Skiba, R. J., & Peterson, R. L. (2000). School discipline at a crossroads: From zero tolerance to early response. *Exceptional Children, 66(3)*, 335-346. http://find.galegroup.com.libproxy.lib.csusb.edu/gtx/retrieve.do?contentSet=IAC-Documents&qrySerId=&inPS=true&tabID=T002&prodId=AONE&searchId=R1&retrieveFormat=PDF&currentPosition=1&userGroupName=csusb&resultListType=RESULT_LIST&sort=DateDescend&docId=A61585782&noOfPages=12

Skiba, R., & Sprague, J. (2008). Safety without suspension. *Educational Leadership, 66(1)*, 38-43. http://www.ascd.org/publications/educational-leadership/sept08/vol66/num01/toc.aspx

Slavin, R. E. (2007). *Educational research: In an age of accountability.* Boston: Pearson Education, Inc.

Sprague, J. (2009, November 4). Best behavior: Building positive behavior supports in schools [Lecture notes]. Moreno Valley, CA: Author.

Stollar, S. A., Poth, R. L., Curtis, M. J., & Cohen, R. (2006). Collaborative strategic planning as illustration of the principles of systems change. *School Psychology Review, 35(2)*, 181-197. http://www.nasponline.org/publications/spr/index.aspx?vol=35&issue=2

Sugai, G. (2007). Promoting behavioral competence in schools: A commentary on exemplary practices. *Psychology in the Schools 44(1)*, 113-118. DOI:10.1002/pits.20210

Sugai, G., & Horner, R. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child & Family Behavior Therapy, 24*(1-2), 23-50. DOI:10.1300/J019v24n01_03

Sugai, G., & Horner, R. H. (2004). School-wide positive behavior support: Implementer's blueprint and self-assessment. Retrieved on January 16, 2010, from *OSEP Technical Assistance Center on Positive Behavioral Interventions and Supports*. http://www.pbis.org/pbis_resource_detail_page.aspx?Type=3&PBIS_ResourceID=284

Sugai, G., & Horner, R. H. (2006). A promising approach for expanding and sustaining school-wide positive behavior support. *School Psychology Review, 35*(2), 245-259. http://www.nasponline.org/publications/spr/index.aspx?vol=35&issue=2

Sugai, G., & Horner, R. H. (2008). What we know and need to know about preventing problem behavior in schools. *Exceptionality, 16*(2), 67-77. DOI:10.1080/09362830801981138

Sugai, G., Horner, R. H., Dunalp, G., Hieneman, M., Lewis, T. J., Nelson, C. M., Scott, T., . . . Ruef, M. (2000). Applying positive behavior support and functional behavioral assessment in schools. *Journal of Positive Behavior Interventions, 2(3)*, 131-143. DOI:10.1177/109830070000200302

Sugai, G., Horner, R. H., & Lewis-Palmer, T. (2009, August). *Team implementation checklist, v. 3.0.* Retrieved on January 16, 2011 from Michigan's Integrated Behavior and Learning Support Initiative. http://miblsi.cenmi.org/MiBLSiModel/Evaluation/Measures/PBISTeamImplementationChecklist.aspx

Sugai, G., Horner, R. H., & Todd, A. W. (2003, August). *Effective behavior support (EBS) self-assessment survey version 2.0.* Retrieved on January 16, 2011 from OSEP Technical Assistance Center on Positive Behavior Interventions and Supports. http://www.pbis.org/google_search.aspx?keyword=Effective%20Behavior%20Support%20(EBS)%20Self-Assessment%20Survey

Sugai, G., Lewis-Palmer, T. J., Todd, A. W., & Horner, R. (2005, June). *School-wide evaluation tool version 2.1.* Retrieved on January 16, 2011 from OSEP Technical Assistance Center on Positive Behavior Interventions and Supports. http://www.pbis.org/evaluation/evaluation_tools.aspx

Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing school violence: The use of office discipline referrals to assess and

monitor school-wide discipline interventions. *Journal of Emotional & Behavioral Disorders, 8(2)*, 94-101. http://search.ebscohost.com.libproxy.lib.csusb.edu/login.aspx?direct=true&db=aph&AN=3183610&site=ehost-live

Taylor-Greene, S., Brown, D., & Nelson, L. (1997). School-wide behavioral support: Starting the year off right. *Journal of Behavioral Education, Vol 7(1)*, 99-112. DOI:1053-0819/97/0300-0099

Theoharris, G. (2007). Social justice educational leaders and resistance: Toward a theory of social justice leadership. *Educational Administration Quarterly, 43(2)*, 221-258. DOI:10.1177/0013161X06293717

Tobin, T. J., & Sugai, G. M. (1999). Using sixth-grade school records to predict school violence, chronic discipline problems, and high school outcomes. *Journal of Emotional and Behavioral Disorders, 7(1)*, 40-53. DOI:10.1177/106342669900700105

Turnbull, A., Edmonson, H., Griggs, P., Wicham, D., Sailor, W., Freeman, R., Guess, D. . . . Warren, J. (2002). A blueprint for schoolwide positive behavior support: Implementation of three components. *Exceptional Children, 68(3)*, 377-402. http://www.cec.sped.org/AM/Template.cfm?Section=Home&CONTENTID=4526&TPPID=2854&TPLID=23&TEMPLATE=/TaggedPage/TaggedPageDisplay.cfm

Verdugo, R. R., & Schneider, J. M. (1999). Quality schools, safe schools: A theoretical and empirical discussion. Education and Urban Society, 31(3), 286-308. DOI:10.1177/0013124599031003003

Walker, B., Cheney, D., & Stage, S. (2009). The validity and reliability of the self-assessment and program review: Assessing school progress in schoolwide positive behavior support. *Jouranl of Positive Behavior Interventions, 11(2)*, 94-109. DOI:10.1177/1098300708322445

Walker, B., Cheney, D., Stage, S., Blum, C., & Horner, R. H. (2005). Schoolwide screening and positive behavior supports: Identifying and supporting students at risk for school failure. *Journal of Positive Behavior Interventions, 7(4)*, 194-204. DOI:10.1177/10983007050070040101

Walker, H. M., Horner, R. H., Sugai, G., Bullis, M., Sprague, J. R., Bricker, D., & Kaufman, M. (1996). Integrated approaches to preventing antisocial behavior patterns among school-age children and youth. *Journal of Emotional and Behavioral Disorders, 4(4),* 194-209. http://search.ebscohost.com.libproxy.lib.csusb.edu/login.aspx?direct=true&db=aph&AN=9612132239&site=ehost-live

Warren, A. F. (2007). The relationship between reported incidents of student discipline and student achievement across four eastern states. *Unpublished doctoral dissertation, Virgina Polytechnic Institute and State University.*

Warren, J. S., Bohanon-Edmonson, H. M., Turnball, A. P., Sailor, W., Wickham, D., Griggs, P., & Beech, S. E. (2006). School-wide positive behavior support: Addressing behavior problems that impede student learning. *Educational Psychology Review, 18*(2), 187-198. DOI:10.1007/s10648-006-9008-1

Warren, J. S., Edmonson, H. M., Griggs, P., Lassen, S. R., McCart, A., Turnbull, A., & Sailor, W. (2003). Urban applications of school-wide positive behavior support: Critical issues and lessons learned. *Journal of Positive Behavior Interventions, 5(80)*, 80-91. DOI:10.1177/10983007030050020301